(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electronics and Communication Engineering

Name of the Activity: Doubts Clearing Session

Faculty Name: Dr. R. Manojkumar

Class: I – II / CSE-C

Academic Year: 2023-24

Subject Name: Basic Electrical Engineering

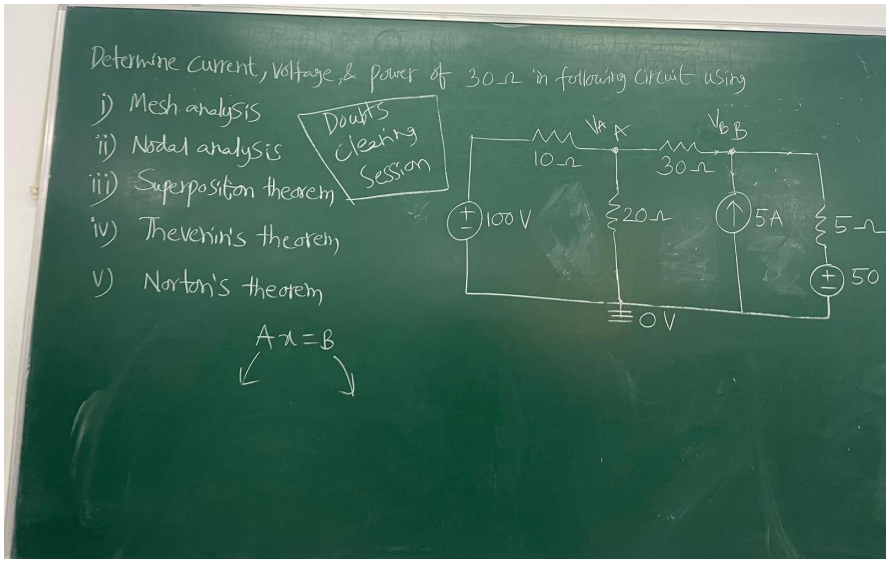
Topic: Electrical Circuit Theorems

Date: 28.02.24

Write-up: A doubt clearing session on electrical circuit theorems was conducted to help students consolidate their understanding and address any uncertainties related to key theorems such as Ohm's Law, Kirchhoff's Laws, Thevenin's Theorem, Norton's Theorem, and Superposition Theorem. This interactive session aimed to provide a platform for students to ask questions, discuss problems, and receive clarifications in a collaborative environment.

No. of Students Participated: 64

Photos:




Indigenous Technologies for
Viksit Bharat

Faculty Sign

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electronics and Communication Engineering

Name of the Activity: Doubts Clearing Session-2

Faculty Name: Dr. R. Manojkumar

Class: I – II / CSE-C

Academic Year: 2023-24

Subject Name: Basic Electrical Engineering

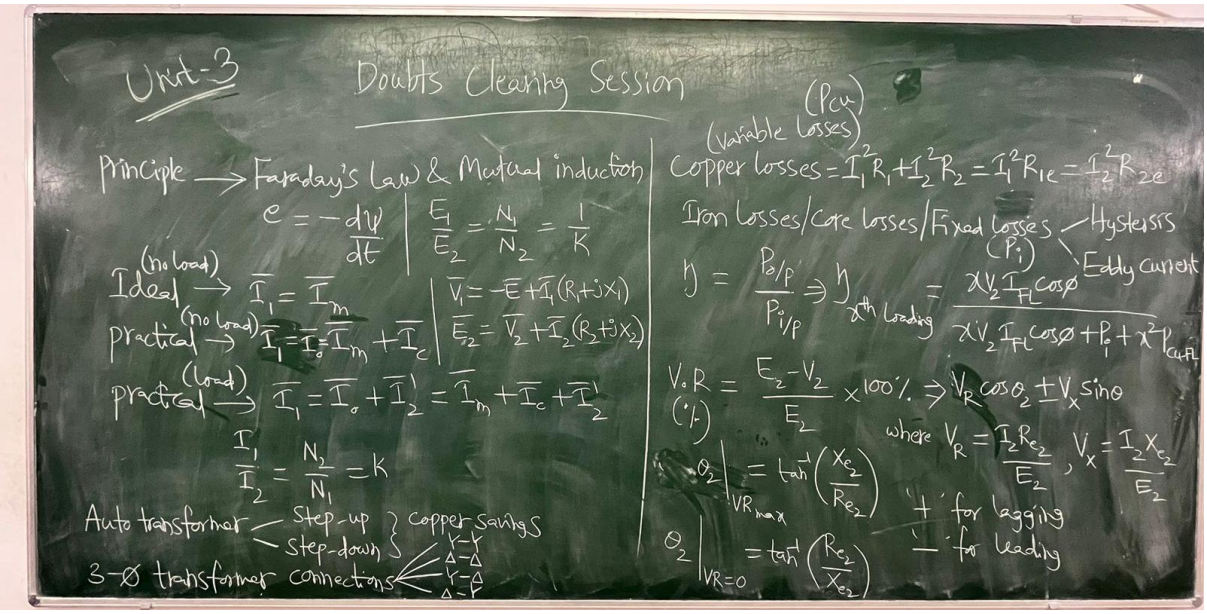
Topic: Transformers

Date: 27.03.24

Write-up: A doubt clearing session on transformers was conducted to help students consolidate their understanding and address any uncertainties related to key concepts such as the working principle of transformers, types of transformers, equivalent circuit model, efficiency, voltage regulation, and applications. This interactive session aimed to provide a platform for students to ask questions, discuss problems, and receive clarifications in a collaborative environment.

No. of Students Participated: 64

Photos:




COLOGNE

Faculty Sign

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electronics and Communication Engineering

Name of the Activity: Real-time Problem based Learning

Faculty Name: Dr. R. Manojkumar

Class: I – II / CSE-C

Academic Year: 2023-24

Subject Name: Basic Electrical Engineering

Topic: Monthly Energy Consumption Calculation of Home with Week Day and Holiday Variation

Date: 18/5/24

Write-up: In this activity, the students aim to analyze the electricity consumption of a household for a recent month, denoted as month "m". The number of units consumed during month "m", referred to as "E1" kWh, is obtained from the electricity bill. To further analyze the energy usage, students categorized the energy consumption of each household appliance based on their usage over a typical working day (Case 1) and a holiday (Case 2) within the same month. By assuming a uniform energy profile throughout the month for week day and holiday seperately, students filled in the data sheet with the daily energy consumption of each appliance for both working days and holidays.

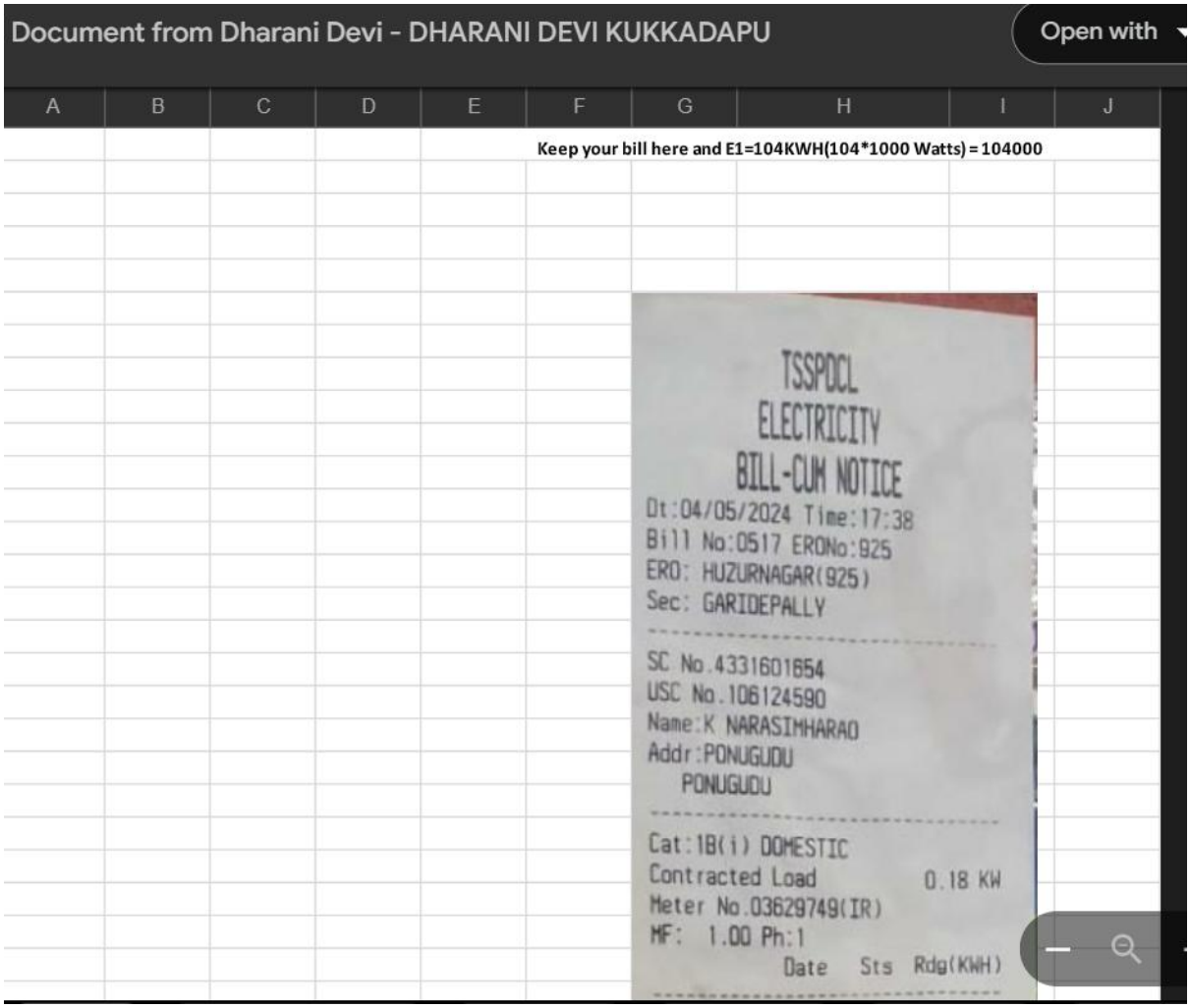
Next, students calculated the total energy consumed by each appliance over the entire month, considering the number of working days and holidays, and denoted these values as Ea1, Ea2, Ea3, etc. The sum of these values gives the total energy consumption for the month, denoted as "E2" kWh. This calculated total, E2, is compared to the actual total energy consumption, E1, from the electricity bill to validate the accuracy of our data and assumptions.

Furthermore, students visualized the data through various plots. The first plot displays the energy consumption of each appliance over a day for both working days and holidays, showing variations in usage patterns. The second plot aggregates the energy consumption of all appliances over a day for both scenarios, providing an overall daily energy profile of the household. The third plot is a bar graph representing the monthly energy consumption of each appliance, highlighting the contribution of each appliance to the total monthly energy usage.

These visualizations and calculations help in understanding the energy consumption patterns of the household, identifying the major contributors to the electricity bill, and potentially finding areas where energy savings can be implemented.

No. of Students Participated: 64

Photos:



R. Manojkumar

Faculty Sign

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electronics and Communication Engineering

Name of the Activity: Real-time Problem based Learning

Faculty Name: Dr. R. Manojkumar

Class: I – II / ECE –A

Academic Year: 2022-23

Subject Name: Basic Electrical Engineering

Topic: Monthly Energy Consumption Calculation of Home

Date: 18/5/23

Write-up: In this activity, the students aim to analyze the electricity consumption of a household for a recent month, denoted as month "m". The number of units consumed during month "m", referred to as "E1" kWh, is obtained from the electricity bill. To further analyze the energy usage, students categorized the energy consumption of each household appliance based on their usage over a typical working day (Case 1) and a holiday (Case 2) within the same month. By assuming a uniform energy profile throughout the month, students filled in the data sheet with the daily energy consumption of each appliance for both working days and holidays.

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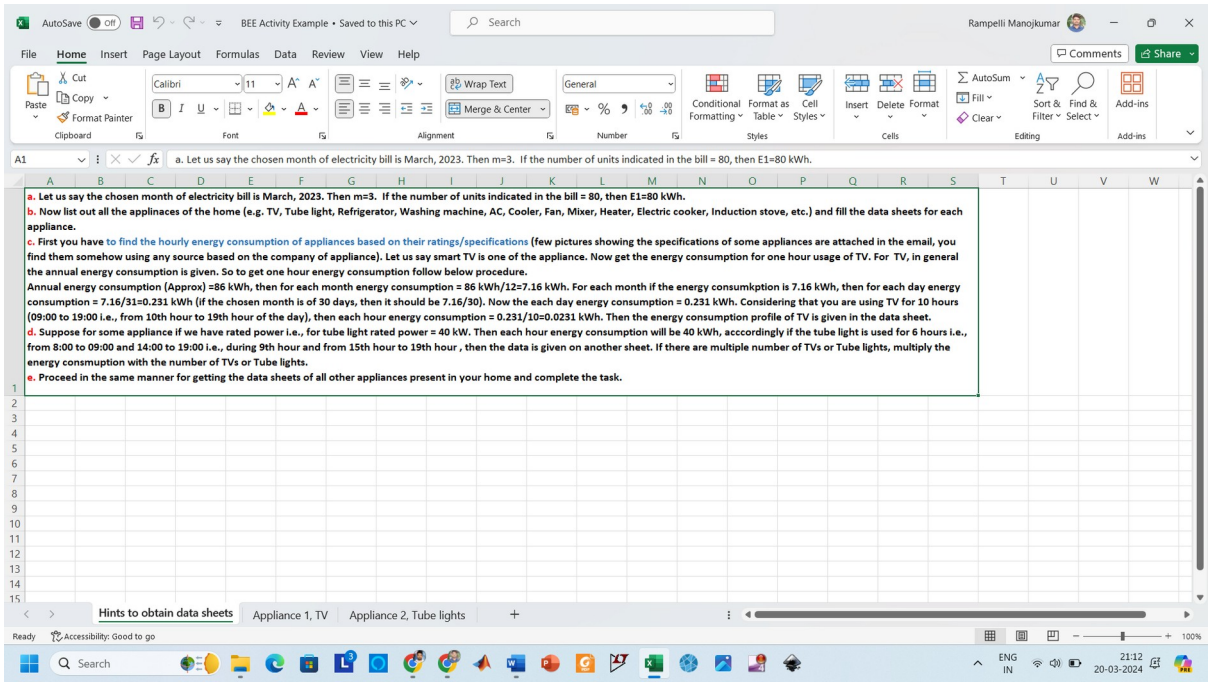
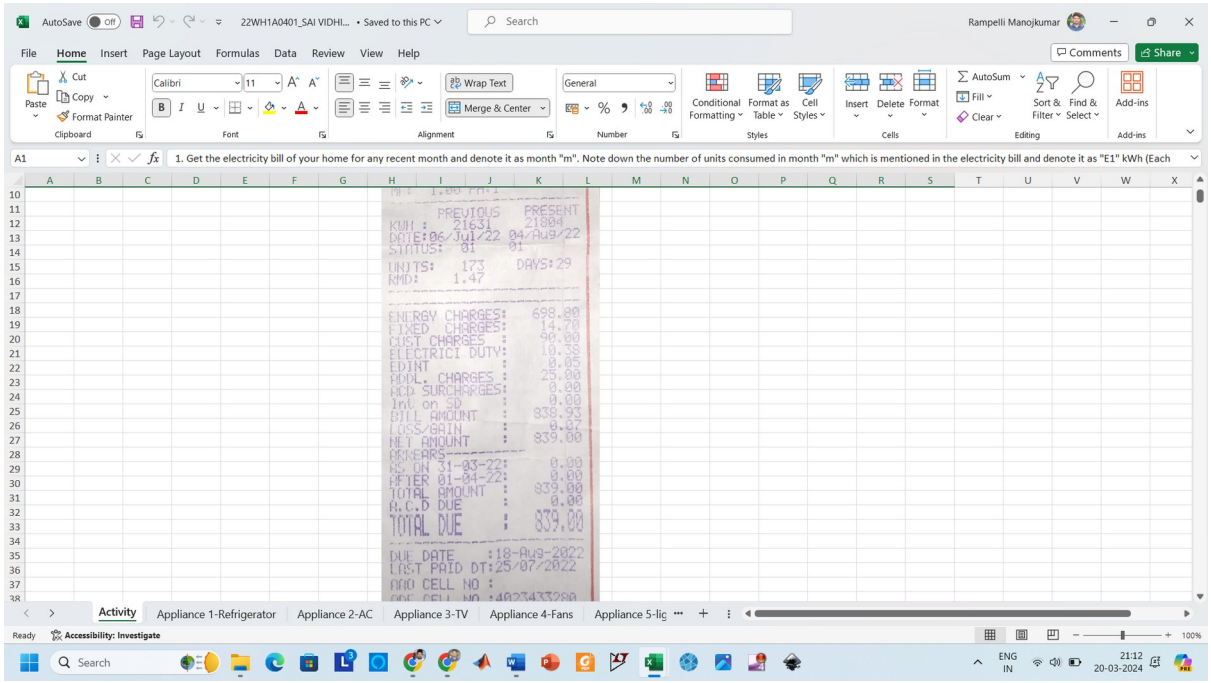
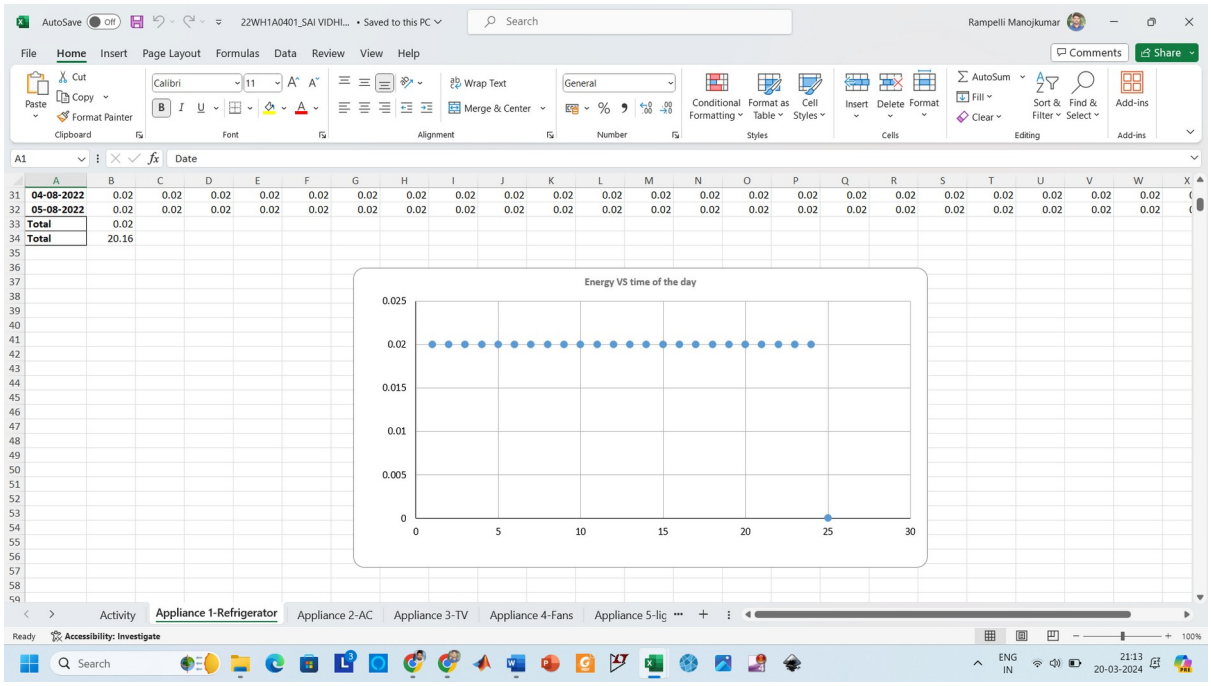
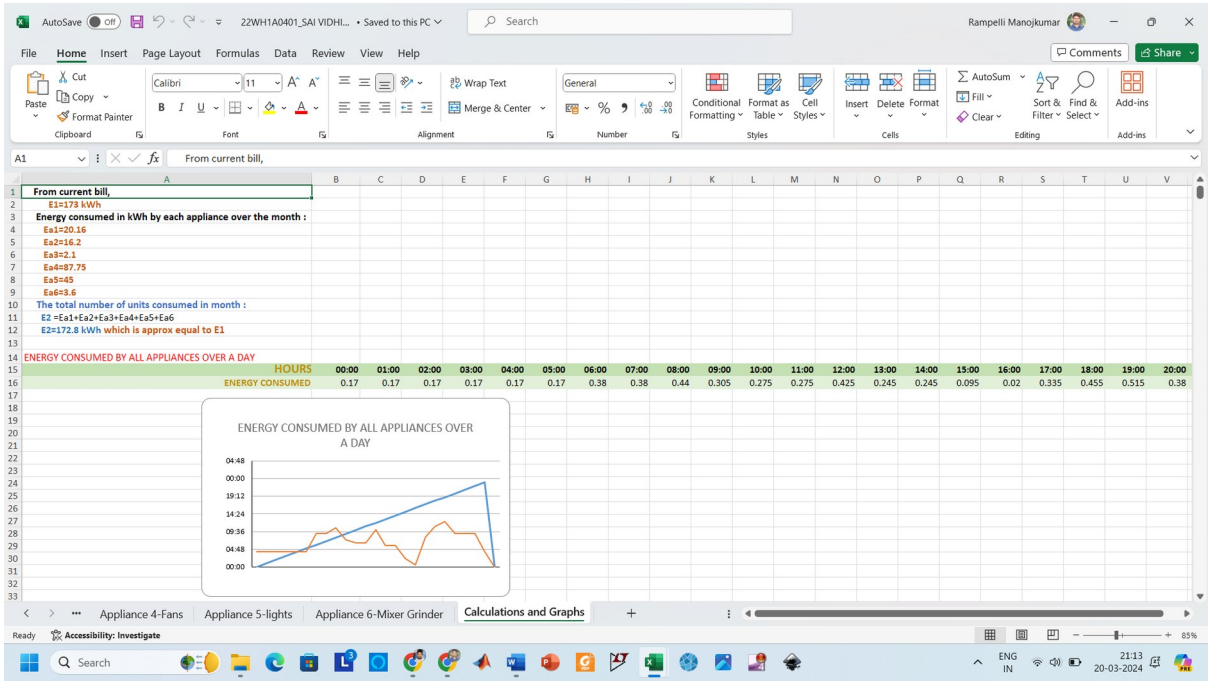

a. Let us say the chosen month of electricity bill is March, 2023. Then m=3. If the number of units indicated in the bill = 80, then E1=80 kWh.
b. Now list out all the applinaces of the home (e.g. TV, Tube light, Refrigerator, Washing machine, AC, Cooler, Fan, Mixer, Heater, Electric cooker, Induction stove, etc.) and fill the data sheets for each appliance.
c. First you have to find the hourly energy consumption of appliances based on their ratings/specifications (few pictures showing the specifications of some appliances are attached in the email, you find them somehow using any source based on the company of appliance). Let us say smart TV is one of the appliance. Now get the energy consumption for one hour usage of TV. For TV, in general the annual energy consumption is given. So to get one hour energy consumption follow below procedure.
Annual energy consumption (Approx) =86 kWh, then for each month energy consumption = 86 kWh/12=7.16 kWh. For each month if the energy consumkption is 7.16 kWh, then for each day energy consumption = 7.16/31=0.231 kWh (if the chosen month is of 30 days, then it should be 7.16/30). Now the each day energy consumption = 0.231 kWh. Considering that you are using TV for 10 hours (09:00 to 19:00 i.e., from 10th hour to 19th hour of the day), then each hour energy consumption = 0.231/10=0.0231 kWh. Then the energy consumption profile of TV is given in the data sheet.
d. Suppose for some appliance if we have rated power i.e., for tube light rated power = 40 kW. Then each hour energy consumption will be 40 kWh, acccordingly if the tube light is used for 6 hours i.e., from 8:00 to 09:00 and 14:00 to 19:00 i.e., during 9th hour and from 15th hour to 19th hour , then the data is given on another sheet. If there are multiple number of TVs or Tube lights, multiply the energy consmuption with the number of TVs or Tube lights.
e. Proceed in the same manner for getting the data sheets of all other appliances present in your home and complete the task.
Hints to obtain data sheets
Appliance 1, TV
Appliance 2, Tube lights


1. Get the electricity bill of your home for any recent month and denote it as month "m". Note down the number of units consumed in month "m" which is mentioned in the electricity bill and denote it as "E1" kWh (Each
PREVIOUS PRESENT
KWH : 21631 21804
DATE:06/Jul/22 04/Aug/22
STATUS: 01 01
UNITS: 173 DAYS:29
RMD: 1.47
ENERGY CHARGES: 698.00
FIXED CHARGES: 14.70
CUST CHARGES 90.00
ELECTRICI DUTY: 10.35
EDINT 0.05
ADDL. CHARGES : 25.00
AED SURCHARGES: 0.00
Ins on SD 0.00
BILL AMOUNT : 838.93
LOSS/GAIN : 0.07
NET AMOUNT : 839.00
ARREARS
AS ON 31-03-22: 0.00
AFTER 01-04-22: 0.00
TOTAL AMOUNT : 839.00
A.C.D DUE : 0.00
TOTAL DUE : 839.00
DUE DATE :18-Aug-2022
LAST PAID DT:25/07/2022
Activity
Appliance 1-Refrigerator
Appliance 2-AC
Appliance 3-TV
Appliance 4-Fans
Appliance 5-lig





Faculty Sign

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electronics and Communication Engineering

Name of the Activity: Real-time Problem based Learning

Faculty Name: Dr. R. Manojkumar

Class: I – II / ECE –B

Academic Year: 2022-23

Subject Name: Basic Electrical Engineering

Topic: Monthly Energy Consumption Calculation of Home

Date: 18/5/23

Write-up: In this activity, the students aim to analyze the electricity consumption of a household for a recent month, denoted as month "m". The number of units consumed during month "m", referred to as "E1" kWh, is obtained from the electricity bill. To further analyze the energy usage, students categorized the energy consumption of each household appliance based on their usage over a typical working day (Case 1) and a holiday (Case 2) within the same month. By assuming a uniform energy profile throughout the month, students filled in the data sheet with the daily energy consumption of each appliance for both working days and holidays.

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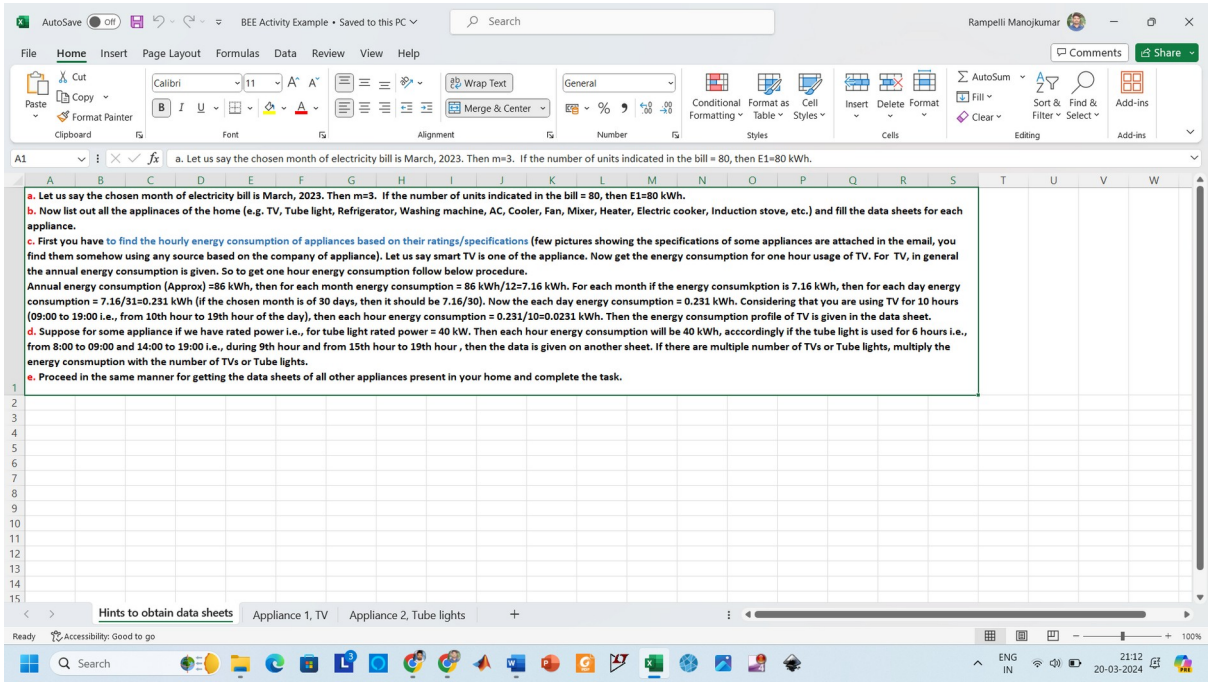
No. of Students Participated: 64

Photos: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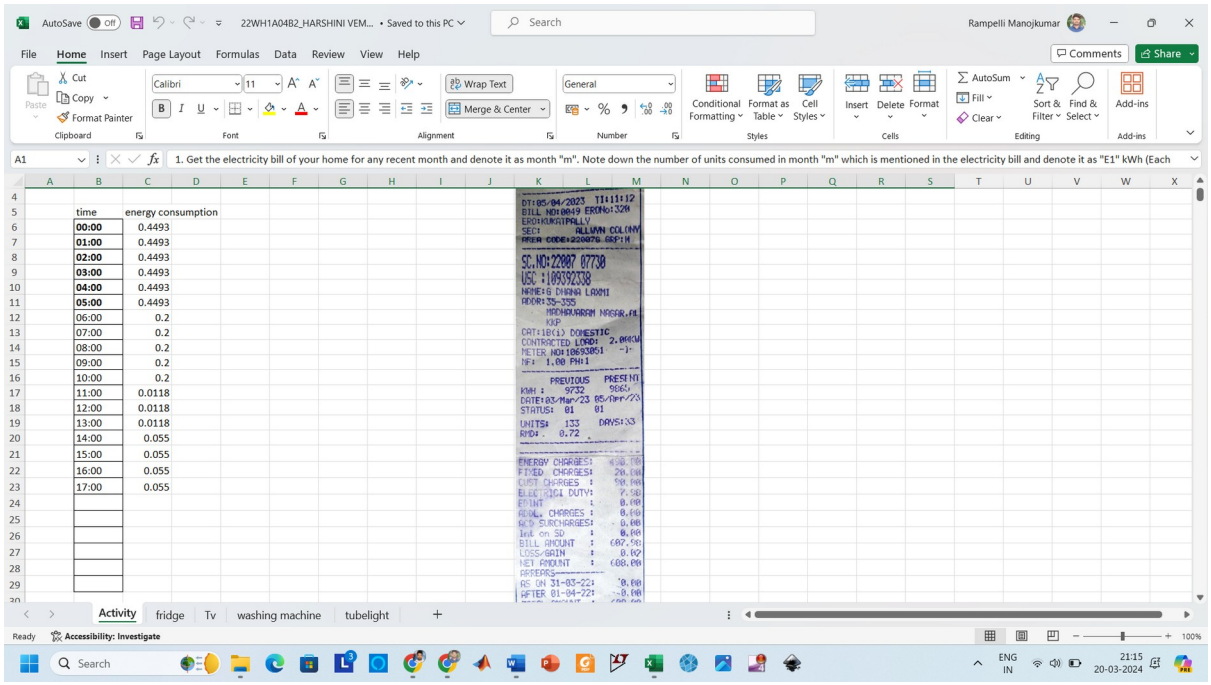
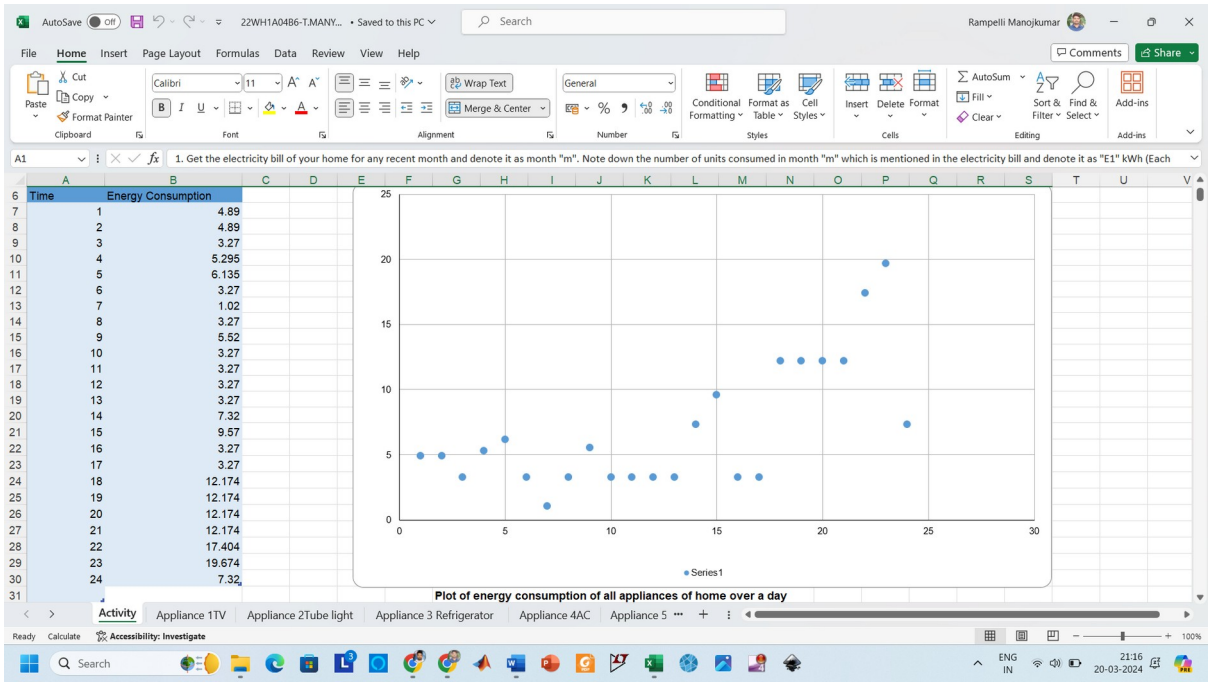
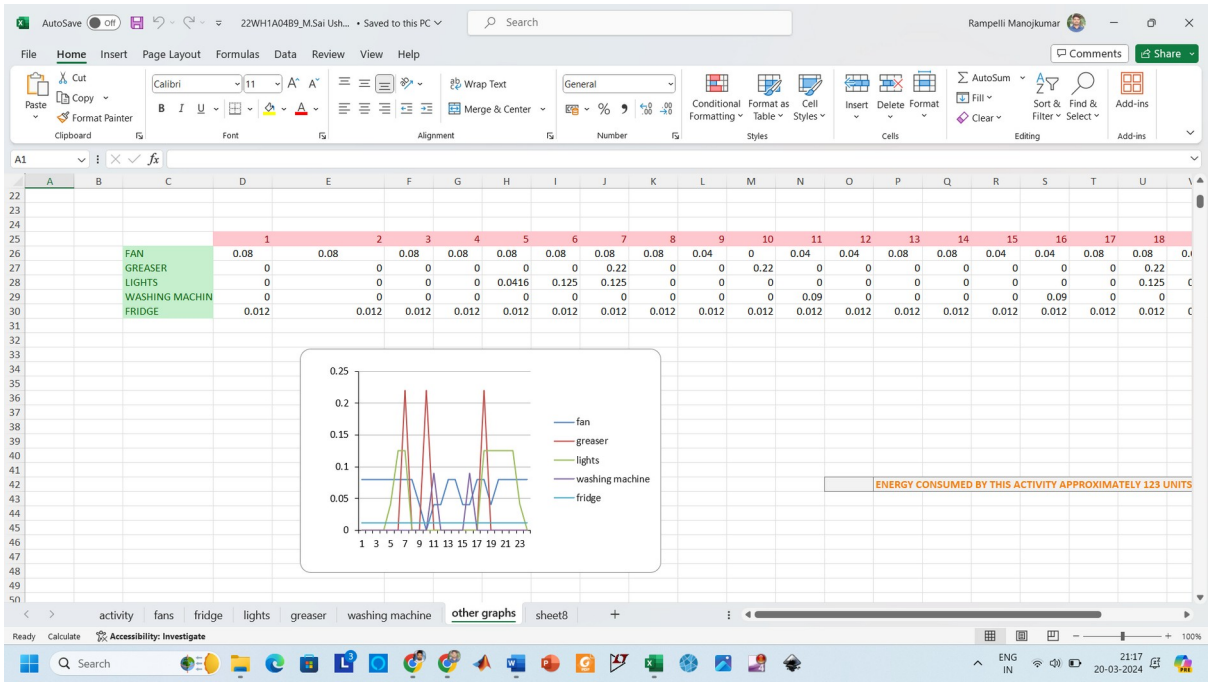

1. Get the electricity bill of your home for any recent month and denote it as month "m". Note down the number of units consumed in month "m" which is mentioned in the electricity bill and denote it as "E1" kWh (Each
time
energy consumption
00:00 0.4493
01:00 0.4493
02:00 0.4493
03:00 0.4493
04:00 0.4493
05:00 0.4493
06:00 0.2
07:00 0.2
08:00 0.2
09:00 0.2
10:00 0.2
11:00 0.0118
12:00 0.0118
13:00 0.0118
14:00 0.055
15:00 0.055
16:00 0.055
17:00 0.055
Activity
fridge
Tv
washing machine
tubelight



Time	Energy Consumption
1	4.89
2	4.89
3	3.27
4	5.295
5	6.135
6	3.27
7	1.02
8	3.27
9	5.52
10	3.27
11	3.27
12	3.27
13	3.27
14	7.32
15	9.57
16	3.27
17	3.27
18	12.174
19	12.174
20	12.174
21	12.174
22	17.404
23	19.674
24	7.32



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
FAN	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.04	0	0.04	0.04	0.08	0.08	0.04	0.04	0.08	0.08
GREASER	0	0	0	0	0	0	0.22	0	0	0.22	0	0	0	0	0	0	0	0.22
LIGHTS	0	0	0	0	0.0416	0.125	0.125	0	0	0	0	0	0	0	0	0	0	0.125
WASHING MACHIN	0	0	0	0	0	0	0	0	0	0	0.09	0	0	0	0	0.09	0	0
FRIDGE	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012

Faculty Sign

BVRIT HYDERABAD College of Engineering for Women
Department of Electrical and Electronics Engineering

Name of the Activity: Case Study on Energy Consumption in your Home

Faculty Name: M Sandeep Kumar

Class: I – II / CSE(AI&ML)

Academic Year: 2023-24

Subject Name: Basic Electrical Engineering

Topic: Energy Consumption in your home

Brief Write – Up

Many students are more inductive than deductive reasoners, which means that they learn better from examples than from logical development starting with basic principles. The use of case studies can therefore be a very effective classroom technique. Case assignments can be done individually or in teams so that the students can brainstorm solutions and share the work load. Students were asked to do activity on Energy consumption in your home i.e. each and every students has to observe the number of hours for which appliance in use in their houses so that they have an idea about usage of appliance and their ratings in order to calculate their energy consumption in their houses. By conducting this activity, they gained knowledge and how to calculate number units consumed by the appliances per day. Based on that they know about electricity bill calculations. Announced the activity in the class on 23.05.2024. Students were asked to prepare a table and calculate the number units consumed by the appliances per day in their home.

Date: 26.05.2024

No. of Students Participated: 60

Photos:

Energy Consumption at Home

1. Name :- K. Mahima
2. Roll Number :- 23WH1A6616
3. Branch :- CSE (AIML)
4. Section :- -
5. Area / locality :- Bachupally

Appliance usage between 8AM to 8PM (26-05-2024)

Name of the Appliance	Quantity	capacity of the appliance (W)	No. of hours used (hr)	Total Energy consumption (W × hr)
Refrigerator	1	800W	12	9600 KWh
WIFI Router	1	10W	12	120 KWh
Washing machine	1	1400W	1/2	700 KWh
Geyser	1	1500W	1/2	750 KWh
Mobile charger	2	5W	1	(5×2) KWh
Laptop charger	1	45W	4	180 KWh
Ceiling fan	3	75W	11	(3×825) KWh
LED tube light	4	20W	5	4×(100) KWh
				14.235 KWh

Total Energy Consumption KWh/day = 28.47 KWh

Total Energy Consumption KWh/month = 882.57 KWh

Total Energy Consumption KWh/year = 10,391.55 KWh

Cost of Energy consumption per month if 1 unit - Rs 1.50/- = 1323.855/-

BVRIT HYDERABAD College of Engineering for Women
Department of Electrical and Electronics Engineering

Name of the Activity: Experimental based learning- Analysing Electrical Circuits using Tinkercad

Faculty Name: M Sandeep Kumar

Class: I – II / CSE(AI&ML)

Academic Year: 2023-24

Subject Name: Basic Electrical Engineering Lab

Topic: Analysing Electrical Circuits using Tinkercad

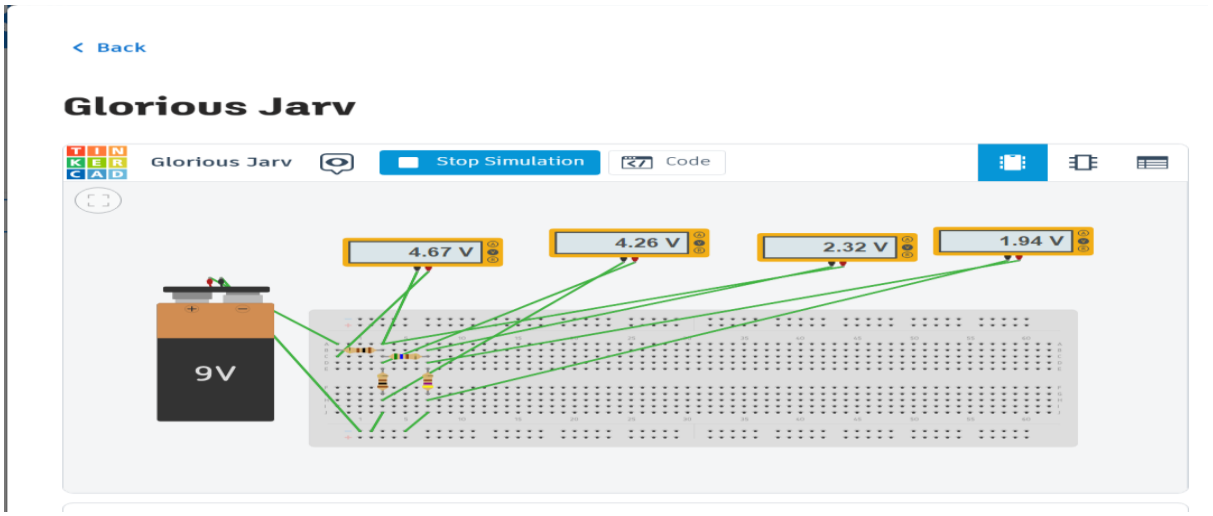
Brief Write – Up

Tinkercad is a tool used to build circuits and control devices, and it also has a built-in Arduino simulator that allows users to program and test their circuits in a virtual environment. This makes it easy to prototype and test new ideas before building them in the real world. As a part of Circculum, Students need to build/develop the circuits either with hardware/software.

Date: 25.05.2024

No. of Students Participated: 60

Photos:



(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women
Department of Electrical and Electronics Engineering

Name of the Activity: "Innovate and Simulate: Using Wokwi for Prototype Development

Faculty Name: Ms.B.Sujatha, Associate Professor , Dr.Prasanta Kumar Jena,Assistant Professor, EEE Department

Class: II-II / EEE

Academic Year: 2023-2024 II Sem

Lab Name: Measurements &Instrumentation Lab

Date: 18/06/2024 &19/06/2024

Topics:

Batch No	Roll No	STUDENT NAME	Title of the Project
1	22WH1A0201	POLKAM LAHARI	Digital clock using DHT sensor
	23WH5A0217	G SAI KEERTHANA	
	22WH1A0219	SADANAVENI RISHITHA	
	22WH1A0206	D.APARANJANI REDDY	
2	23WH5A0212	C AISHWARYA	Raspberry pi pico Interfacing with Ultrasonic Sensor
	23WH5A0208	KATAKAM SRIVANI	
	23WH5A0221	S HARINI	
	22WH1A0228	VADDE SASHUSHMA	
3	23WH5A0216	CHIPPA MANASA	Acceleration detection using MPU6050 sensor
	22WH1A0241	ALUSA SRIJA	
	22WH1A0202	RATHOD KEERTHI	
	22WH1A0212	J.BHAVYA SREE	
4	22WH1A0238	KOTTE SADHVI SREE	Arduino based Digital temperature monitoring system using DHT 11 sensor
	22WH1A0211	R.GAYATHRI	
	22WH1A0204	BUDUTHA MAMATHA	

Batch No	Roll No	STUDENT NAME	Title of the Project
	22WH1A0224	SIPANI PRATHUSHA	
5	22WH1A0234	KADARLA AISHWARYA	Coal stoker flame size detector using flame sensor
	23WH5A0206	VANKUDOTHI JAYASRI	
	22WH1A0245	S.HASINI	
	22WH1A0214	LAKAVATH SHAILU	
6	23WH5A0205	BODIGE MEGHANA	Alarm clock with RTC sensor
	22WH1A0233	LANDE NIHARIKA	
	23WH5A0215	NERELLA CHANDHANA	
	22WH1A0227	P.CHARISHMA	
7	22WH1A0205	SRI PRIYA RATHOD	Motion Detector using PIR Sensor
	22WH1A0218	N.JANANI	
	22WH1A0215	SANAGA JESSI ELINA	
	22WH1A0209	SRIGIRI ADVAITHA	
8	23WH5A0213	REGULA ANJALI	Light detection using LDR Sensor
	22WH1A0221	N.S.D. HARSHITHA	
	22WH1A0222	JONNANA POOJITHA	
	22WH1A0239	CH. SUSHMITHA	
9	22WH1A0237	MADDUR NIKHITHA	Automatic water level controller using ultra Sonic sensor
	22WH1A0247	R.AVANTHI	
	22WH1A0203	M.CHATURYA CHOWDARY	
	22WH1A0220	AJMEERA VIKSHITHA	
10	23WH5A0214	BAIRI CHANDANA	Weather Monitoring Station Using DHT11 Sensor
	23WH5A0218	KUDIKALA JOSHIKA	
	22WH1A0236	CH.NAVYA SRI	
	22WH1A0246	RANGU SRIVANI	
11	23WH5A0203	ADLA ABHINAYA	Gas detector using gas sensor
	22WH1A0249	GUNDU TRIVENI	
	23WH5A0210	RAMAGIRI GREESHMA	
	22WH1A0242	MACHA SHIVA DEEPIKA	
12	23WH5A0204	NERELLA SNEHALATHA	Soil moisture Testing device using

Batch No	Roll No	STUDENT NAME	Title of the Project
	23WH5A0207	KANAKAM VAHINI	capacitive soil moisture sensor
	22WH1A0248	LINGAMPETA NISHITHA	
	22WH1A0213	NASREEN FATHIMA	
13	22WH1A0225	CH.KEERTHANA	Weather monitoring station using DHT22 sensor
	22WH1A0229	GORIGE AISHWARYA	
	22WH1A0232	K. MAHIMA	
	22WH1A0208	GUNDE SREEJA	
14	23WH5A0202	CHINDE AISHWARYA	Direction control of servo motor using ultrasonic sensor
	22WH1A0207	B.LAXMI PRASANNA	
	22WH1A0216	DUBBA VANI	
	22WH1A0231	UPPALA BRINDA	
15	22WH1A0243	TEJAVATH MANASA	Car parking Using Ultrasonic sensor
	23WH5A0201	ALLURI AKSHITHA	
	23WH5A0220	PALLE SHRUTHI	
	22WH1A0240	DIBBA MOUNIKA	
16	22WH1A0235	BANOTHU DEEPIKA	Measurement of distance using HC SR04 distance sensor with Arduino nano
	22WH1A0217	R ABHINAYA	
	23WH5A0209	KORRA HARSHINI	
	22WH1A0230	S.SAI AKSHITHA	
17	23WH5A0211	TOPIYARA BHAVANA	Soil detection using soil moisture sensor
	22WH1A0210	G.BHAVANA	
	22WH1A0223	POLEPALLY LOHITHA	
	23WH5A0219	NOMULA SATHWIKA	
	22WH1A0244	REDDY HASWITHA	

Brief Write – Up:

The activity "Innovate and Simulate: Using Wokwi for Prototype Development" offers a hands-on experience in transforming conceptual ideas into functional prototypes using the Wokwi online simulator. Studnets will learn to design and simulate electronic circuits and embedded systems in a virtual environment, gaining practical skills without the need for physical components. This activity bridges the gap between theory and practice, allowing for

rapid prototyping and iterative design. By the end of the session, participants will have a working prototype model and a deeper understanding of how to utilize simulation tools for innovative development.

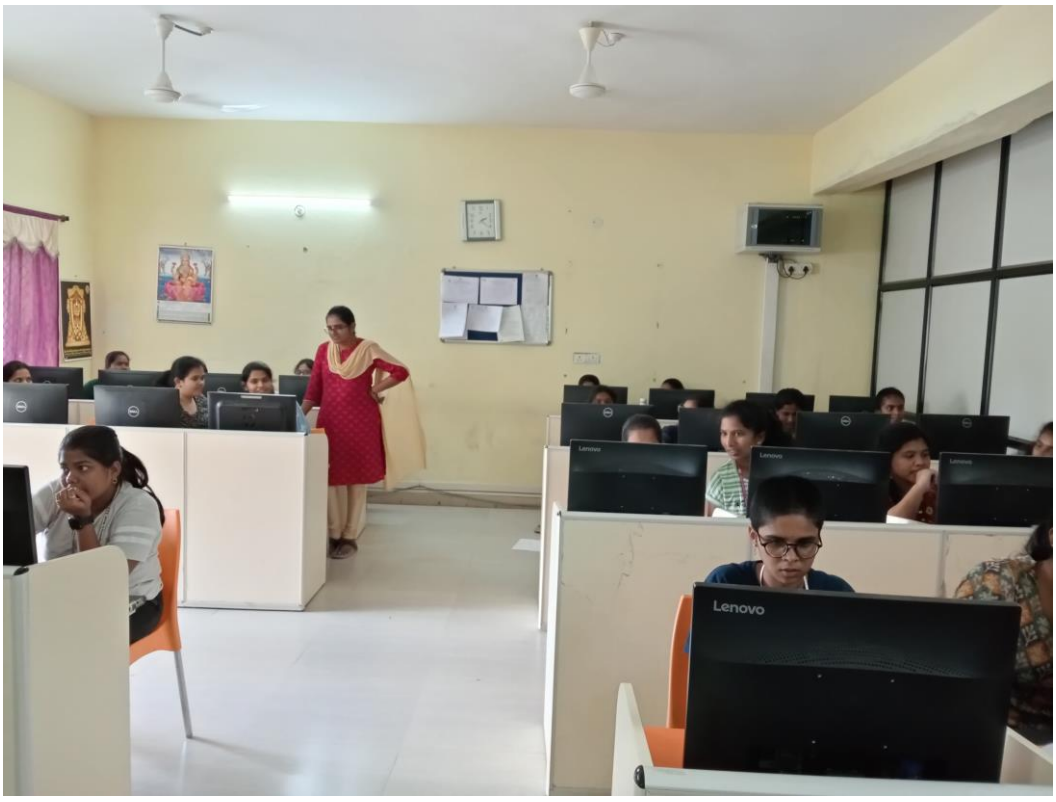
This hands-on approach fosters deep understanding of technical concepts, troubleshooting skills, and iterative improvement. Building prototypes allows for testing and validation of ideas in real-world conditions, ensuring functionality and reliability. Seven teams are used to organize the students. For the purpose of gaining expertise, each team was given a hardware project to complete and then presented their results.

Learning Outcomes:

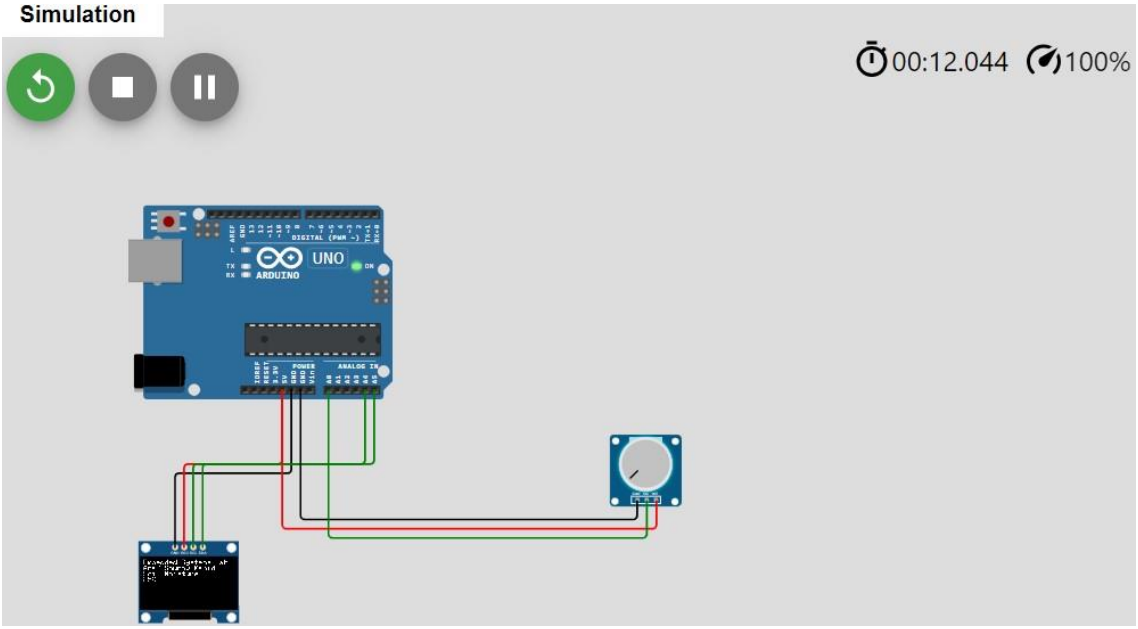
1.Collaboration within teams enhances problem-solving abilities and creativity, often resulting in innovative solutions.
2. Students will understand the importance of iterative design, using simulation to refine and improve their prototypes continuously.
3. Engaging with the Wokwi simulator will stimulate creativity, encouraging participants to explore innovative solutions and design ideas.
4. Students will develop hands-on skills in creating virtual prototypes, allowing them to experiment with designs without needing physical components.

No. of Students Participated: 55

Photos:



Simulation




```
#include <Adafruit_GFX.h>
#include <Adafruit_SSD1306.h>
#define OLED_RESET 4
#define sensor A0
Adafruit_SSD1306 display(OLED_RESET);
void setup()
{
display.begin(SSD1306_SWITCHCAPVCC,0x3c);
display.clearDisplay();
}
void loop()
{
int value = analogRead(sensor);
int percent = map(value, 1024, 0, 0, 25);--
display.setTextSize(0.5);
display.setTextColor(WHITE);
display.setCursor(0,0);
display.println("Embedded Systems Lab");
display.println("Araf Sourov Mahid");
display.println("Soil Moisture");
display.print(percent);
display.print("%");
display.display();
display.clearDisplay();
}

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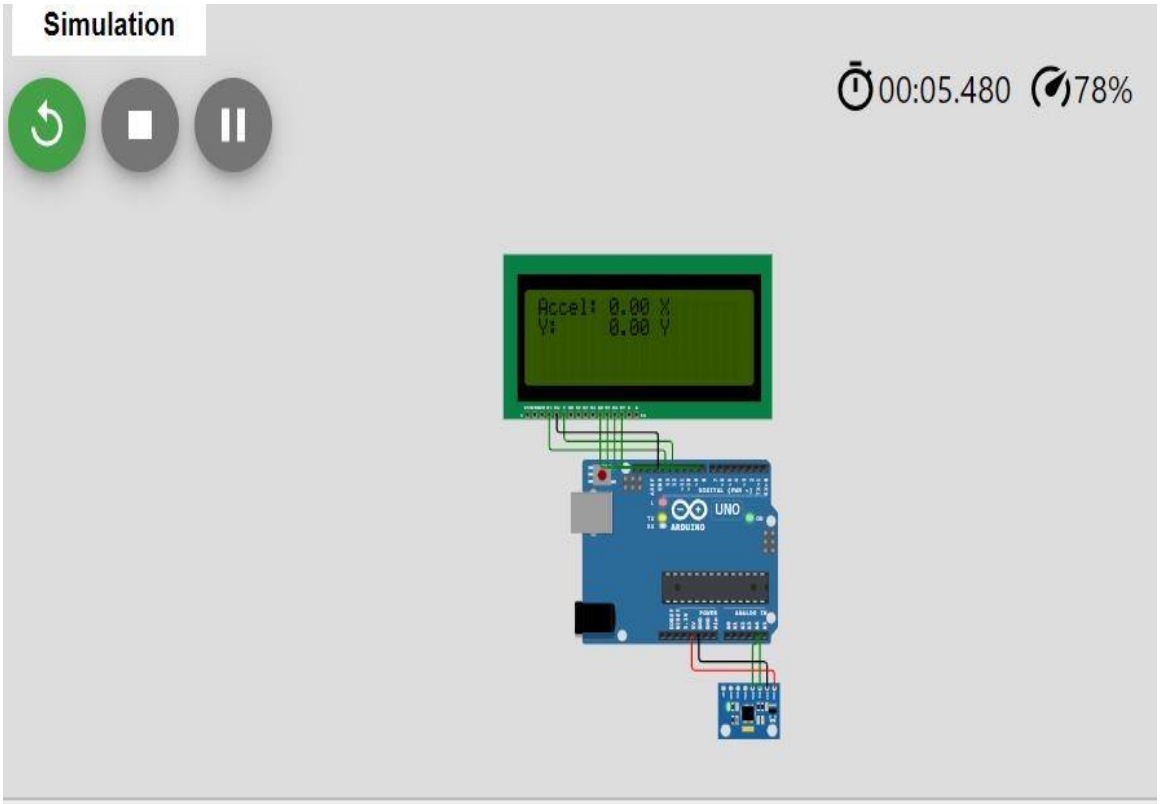


```
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MPU6050 initialized.
Acceleration: X=0.00 Y=0.00 Z=9.81
Acceleration: X=0.00 Y=0.00 Z=9.81
Acceleration: X=0.00 Y=0.00 Z=9.81
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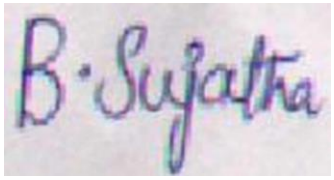


Ms.B.Sujatha
Associate Professor
EEE Department

Prasanta Kumar Jena

Assistant Professor
EEE Department

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electrical and Electronics Engineering

Name of the Activity: "Innovate and Simulate: Using Wokwi for Prototype Development"

Faculty Name: Ms.B.Sujatha, Associate Professor , Dr.Prasanta Kumar Jena,Assistant Professor, EEE Department

Class: II-II / EEE

Academic Year: 2023-2024 II Sem

Lab Name: Measurements &Instrumentation Lab

Date: 18/06/2024 &19/06/2024

Topics:

Batch No	Roll No	STUDENT NAME	Title of the Project
1	22WH1A0201	POLKAM LAHARI	Digital clock using DHT sensor
	23WH5A0217	G SAI KEERTHANA	
	22WH1A0219	SADANAVENI RISHITHA	
	22WH1A0206	D.APARANJANI REDDY	
2	23WH5A0212	C AISHWARYA	Raspberry pi pico Interfacing with Ultrasonic Sensor
	23WH5A0208	KATAKAM SRIVANI	
	23WH5A0221	S HARINI	
	22WH1A0228	VADDE SASHUSHMA	
3	23WH5A0216	CHIPPA MANASA	Acceleration detection using MPU6050 sensor
	22WH1A0241	ALUSA SRIJA	
	22WH1A0202	RATHOD KEERTHI	
	22WH1A0212	J.BHAVYA SREE	
4	22WH1A0238	KOTTE SADHVI SREE	Arduino based Digital temperature monitoring system using DHT 11 sensor
	22WH1A0211	R.GAYATHRI	
	22WH1A0204	BUDUTHA MAMATHA	

Batch No	Roll No	STUDENT NAME	Title of the Project
	22WH1A0224	SIPANI PRATHUSHA	
5	22WH1A0234	KADARLA AISHWARYA	Coal stoker flame size detector using flame sensor
	23WH5A0206	VANKUDOTHI JAYASRI	
	22WH1A0245	S.HASINI	
	22WH1A0214	LAKAVATH SHAILU	
6	23WH5A0205	BODIGE MEGHANA	Alarm clock with RTC sensor
	22WH1A0233	LANDE NIHARIKA	
	23WH5A0215	NERELLA CHANDHANA	
	22WH1A0227	P.CHARISHMA	
7	22WH1A0205	SRI PRIYA RATHOD	Motion Detector using PIR Sensor
	22WH1A0218	N.JANANI	
	22WH1A0215	SANAGA JESSI ELINA	
	22WH1A0209	SRIGIRI ADVAITHA	
8	23WH5A0213	REGULA ANJALI	Light detection using LDR Sensor
	22WH1A0221	N.S.D. HARSHITHA	
	22WH1A0222	JONNANA POOJITHA	
	22WH1A0239	CH. SUSHMITHA	
9	22WH1A0237	MADDUR NIKHITHA	Automatic water level controller using ultra Sonic sensor
	22WH1A0247	R.AVANTHI	
	22WH1A0203	M.CHATURYA CHOWDARY	
	22WH1A0220	AJMEERA VIKSHITHA	
10	23WH5A0214	BAIRI CHANDANA	Weather Monitoring Station Using DHT11 Sensor
	23WH5A0218	KUDIKALA JOSHIKA	
	22WH1A0236	CH.NAVYA SRI	
	22WH1A0246	RANGU SRIVANI	
11	23WH5A0203	ADLA ABHINAYA	Gas detector using gas sensor
	22WH1A0249	GUNDU TRIVENI	
	23WH5A0210	RAMAGIRI GREESHMA	
	22WH1A0242	MACHA SHIVA DEEPIKA	
12	23WH5A0204	NERELLA SNEHALATHA	Soil moisture Testing device using

Batch No	Roll No	STUDENT NAME	Title of the Project
	23WH5A0207	KANAKAM VAHINI	capacitive soil moisture sensor
	22WH1A0248	LINGAMPETA NISHITHA	
	22WH1A0213	NASREEN FATHIMA	
13	22WH1A0225	CH.KEERTHANA	Weather monitoring station using DHT22 sensor
	22WH1A0229	GORIGE AISHWARYA	
	22WH1A0232	K. MAHIMA	
	22WH1A0208	GUNDE SREEJA	
14	23WH5A0202	CHINDE AISHWARYA	Direction control of servo motor using ultrasonic sensor
	22WH1A0207	B.LAXMI PRASANNA	
	22WH1A0216	DUBBA VANI	
	22WH1A0231	UPPALA BRINDA	
15	22WH1A0243	TEJAVATH MANASA	Car parking Using Ultrasonic sensor
	23WH5A0201	ALLURI AKSHITHA	
	23WH5A0220	PALLE SHRUTHI	
	22WH1A0240	DIBBA MOUNIKA	
16	22WH1A0235	BANOTHU DEEPIKA	Measurement of distance using HC SR04 distance sensor with Arduino nano
	22WH1A0217	R ABHINAYA	
	23WH5A0209	KORRA HARSHINI	
	22WH1A0230	S.SAI AKSHITHA	
17	23WH5A0211	TOPIYARA BHAVANA	Soil detection using soil moisture sensor
	22WH1A0210	G.BHAVANA	
	22WH1A0223	POLEPALLY LOHITHA	
	23WH5A0219	NOMULA SATHWIKA	
	22WH1A0244	REDDY HASWITHA	

Brief Write – Up:

The activity "Innovate and Simulate: Using Wokwi for Prototype Development" offers a hands-on experience in transforming conceptual ideas into functional prototypes using the Wokwi online simulator. Studnets will learn to design and simulate electronic circuits and embedded systems in a virtual environment, gaining practical skills without the need for physical components. This activity bridges the gap between theory and practice, allowing for

rapid prototyping and iterative design. By the end of the session, participants will have a working prototype model and a deeper understanding of how to utilize simulation tools for innovative development.

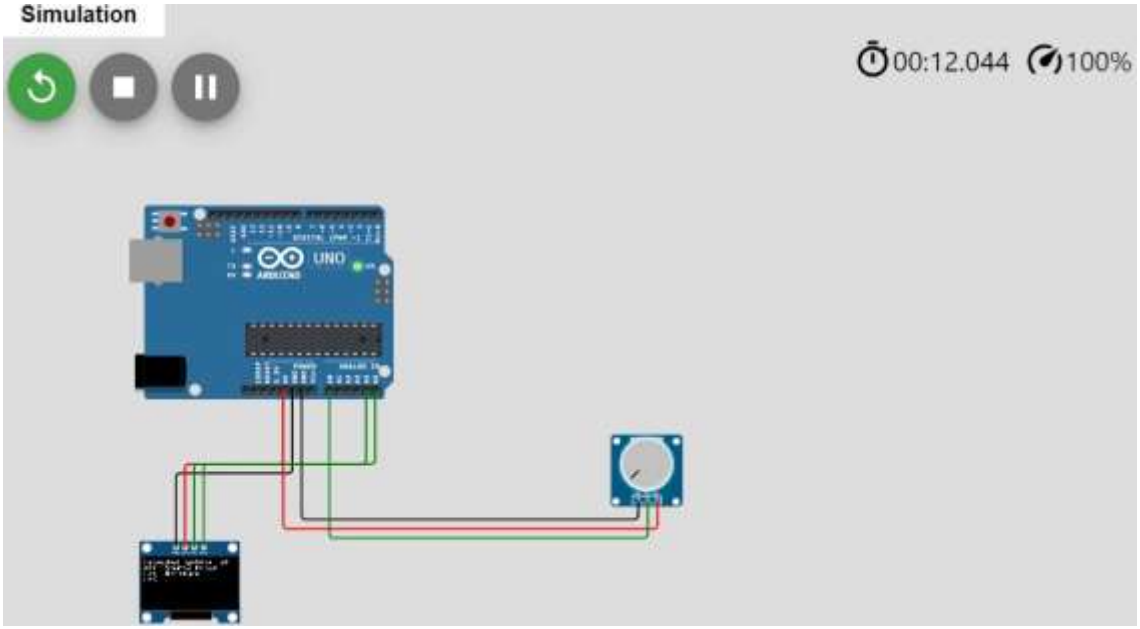
This hands-on approach fosters deep understanding of technical concepts, troubleshooting skills, and iterative improvement. Building prototypes allows for testing and validation of ideas in real-world conditions, ensuring functionality and reliability. Seventeen teams are used to organize the students. For the purpose of gaining expertise, each team was given a hardware project to complete and then presented their results.

Learning Outcomes:

1.Collaboration within teams enhances problem-solving abilities and creativity, often resulting in innovative solutions.
2. Students will understand the importance of iterative design, using simulation to refine and improve their prototypes continuously.
3. Engaging with the Wokwi simulator will stimulate creativity, encouraging participants to explore innovative solutions and design ideas.
4. Students will develop hands-on skills in creating virtual prototypes, allowing them to experiment with designs without needing physical components.

No. of Students Participated: 55

Photos:

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#define sensor A0
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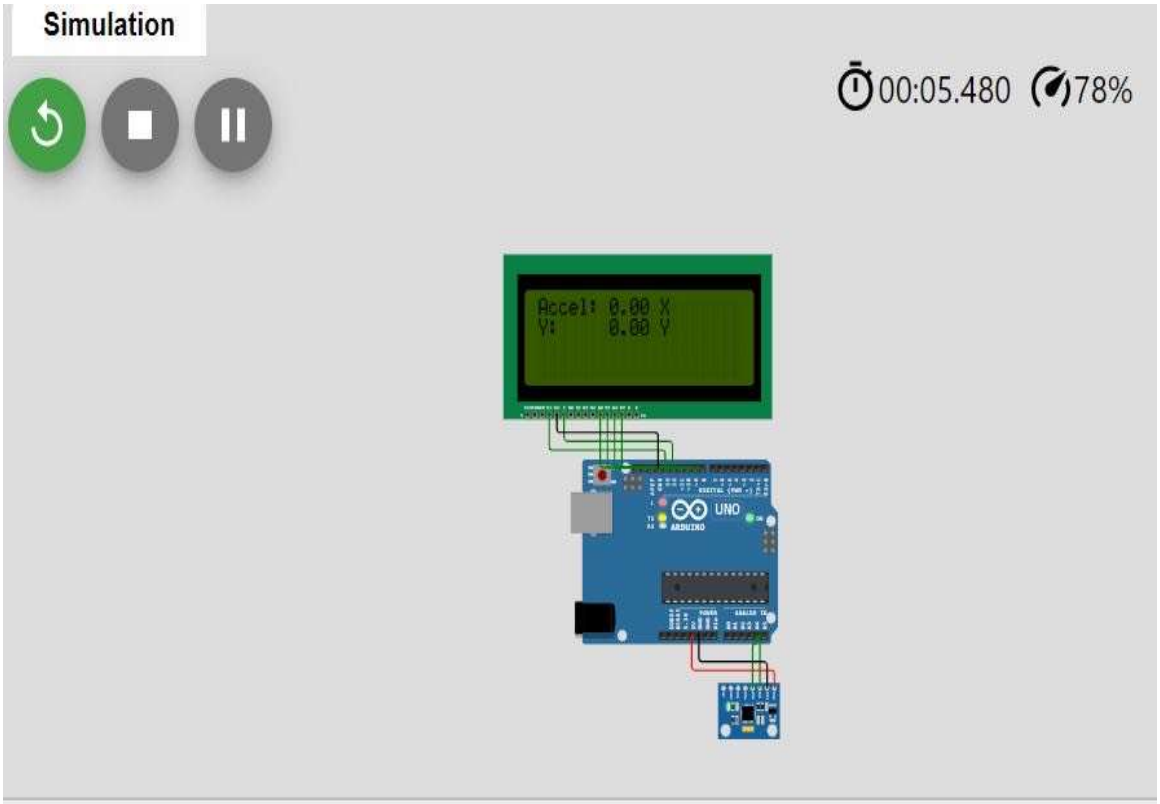
```

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Acceleration: X=0.00 Y=0.00 Z=9.81
Acceleration: X=0.00 Y=0.00 Z=9.81
```
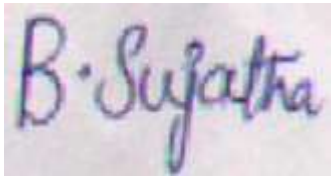



Ms.B.Sujatha
Associate Professor
EEE Department

Prasanta Kumar Jena

Assistant Professor
EEE Department

BVRIT HYDERABAD College of Engineering for Women

Department of Electrical and Electronics Engineering

Name of the Activity: Quiz

Faculty Name: Dr. Chava Sunil Kumar **Class: IV – II / CSE A**

Academic Year: 2023-24

Subject Name: Basics of Power Plant Engineering (BPPE)

Topic: Unit-I, Unit-II, Unit-III, Unit-IV, Unit-V of BPPE

Date: 14 March 2024, 20 May 2024.

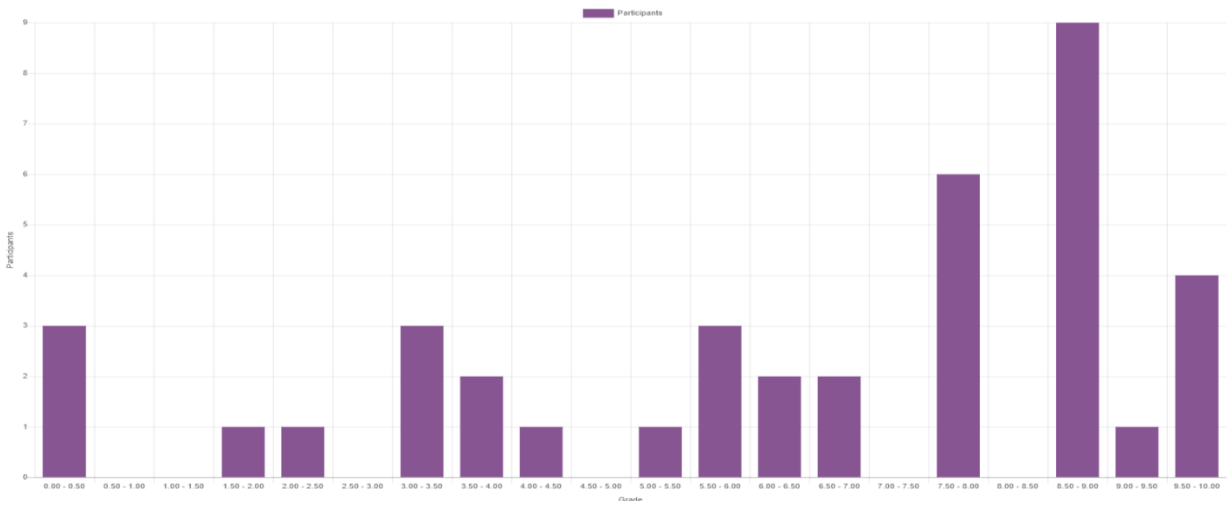
Brief Write-up

Moodle is one of the Learning Management System (LMS) where we can incorporate required additional tools which are used for teaching learning activities. Quiz is one of the powerful tool to monitor and diagnose the student performance with certain types of knowledge. Using this tool effectively can boost your course's effectiveness, and promote student performance. The quiz is scheduled in the Moodle with time limits and informed the same who students who were added in the Moodle course and the quiz is consisting of Multiple-choice questions with easy, moderate and hard levels.

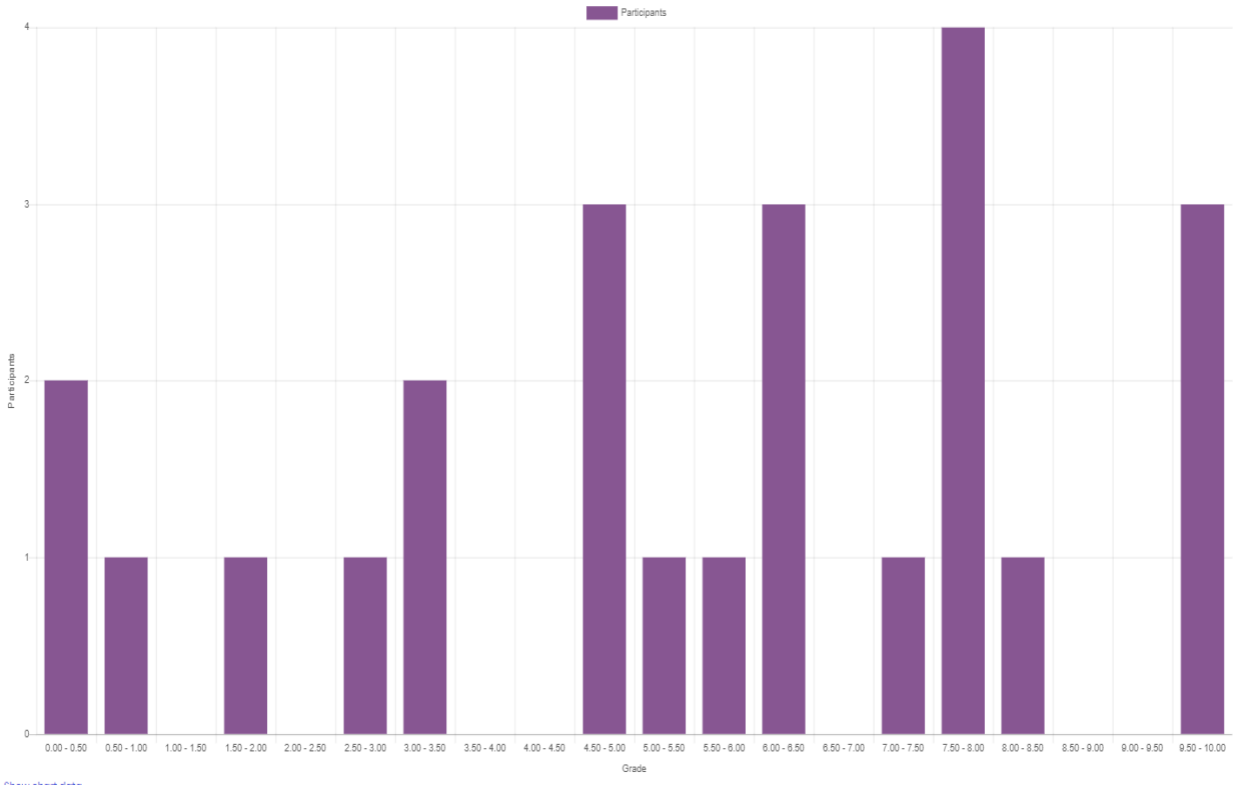
The advantages of Online Quiz in Moodle are as follows.

1. Students can be engaged remotely in an attractive mode
2. At the same time large number of students can take the test.
3. The questions and options are randomized.
4. Results and summary of quiz with correct options can be displayed immediately after completing the quiz.
5. Faculty can analyze the students understanding levels with the results immediately.

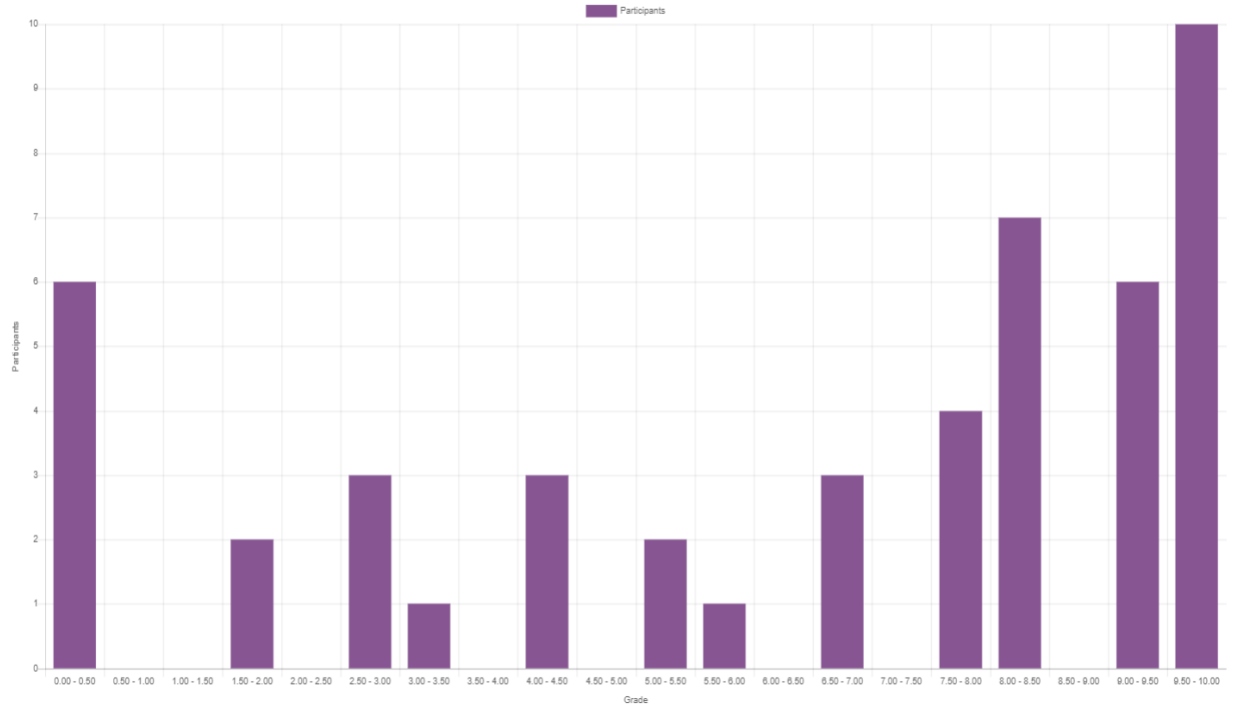
Unit – I Quiz, No. of Students participated: 40



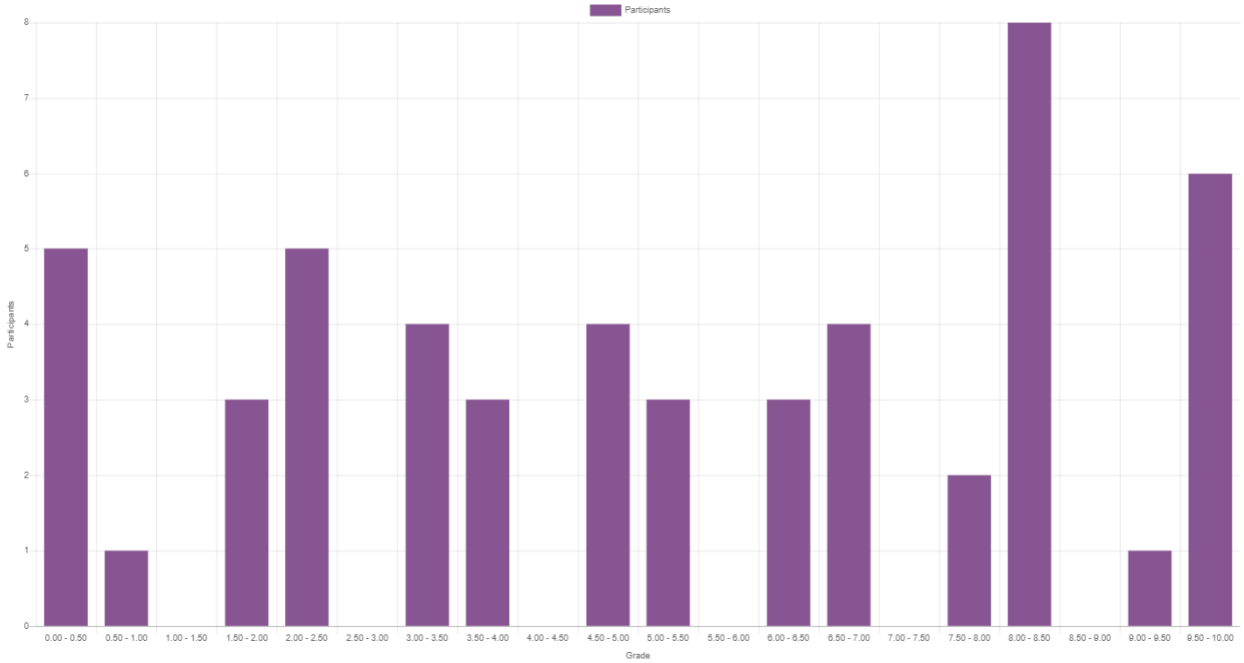
Unit-II Quiz, No. of Students participated: 24



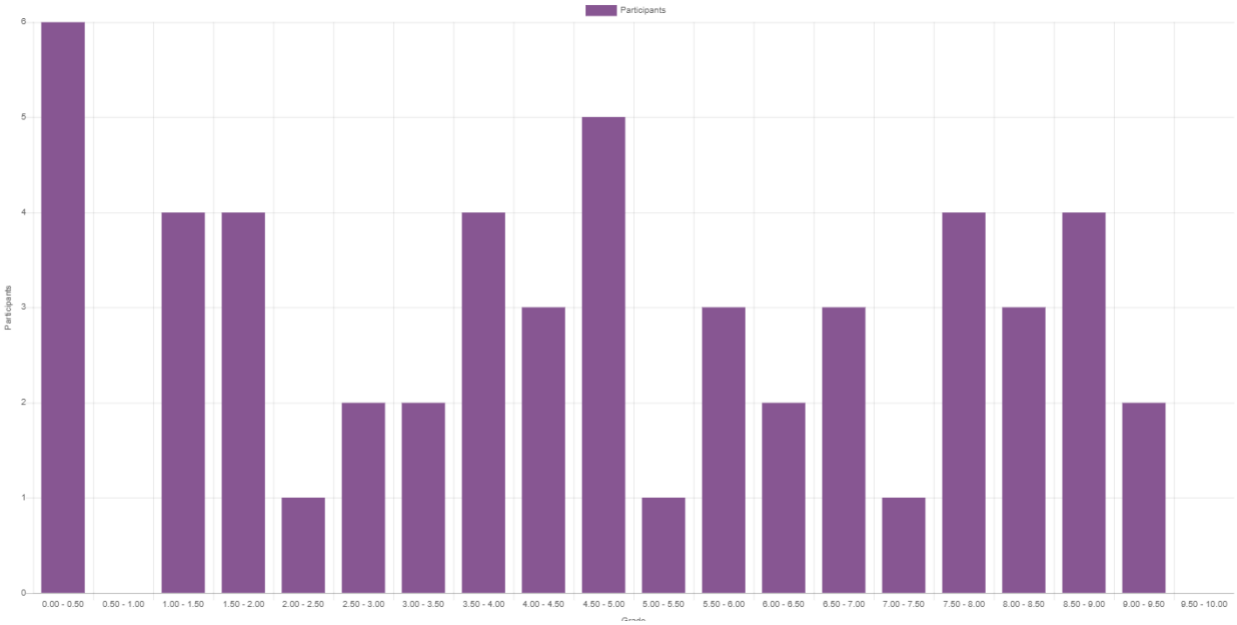
Unit-III Quiz, No. of Students participated: 51



Unit-IV Quiz, No. of Students participated: 54



Unit-V Quiz, No. of Students participated: 56



(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electrical and Electronics Engineering

Name of the Activity: From Concept to Implementation with Prototype Models
Faculty Name: Ms.B.Sujatha, Associate Professor , Ms.K.Bhvaya ,Assistant Professor, EEE Department
Class: IV-I/ EEE
Academic Year: 2023-2024 I Sem
Lab Name: Electrical & Electronics Design Lab
Date: 15/11/2023 & 18/11/2023
Topics:

Team No	Roll No	Name of the student	Prototype Model
1	20WH1A0207 20WH1A0227 20WH1A0239 20WH1A0243 20WH1A0246 20WH1A0221	Ms.J.Divya Ms.P.Kavya Sri Ms.Sneha Manoharan Ms.R.Likitha Ms.G.Ramya Naidu Ms.V.K.Pravallika	Water level detector using float sensor
2	20WH1A0212 20WH1A0213 20WH1A0214 20WH1A0215 20WH1A0216 20WH1A0228 20WH1A0229 20WH1A0233 20WH1A0242	Ms.S. Keerthana Ms.Boddupalli Ankitha Ms.Appala Prathyusha Ms. Muddam Nikshiptha Ms.G.Swetha Ms.K Rathnamma Ms.P.Anusha Ms. M Niteesha Ms.K.S.Deekshitha	Detector for fire alarm

3	20WH1A0234 21WH5A0202 21WH5A0204 21WH5A0206 21WH5A0216 21WH5A0217 21WH5A0218 21WH5A0211 21WH5A0205 21WH5A0207 21WH5A0208	Ms.Arroju Asritha Ms.Nabieha Ms.B.Mahaveen Ms. Sudhamalla Sai Meghana Ms. U. Devi Sri Naga Pavanika Ms.G.Sahithi Ms.M.Divya Ms. Ponnaganti Sri Bhargavi Ms.R.Shivani Ms. Enikepally Tejaswi Ms. Edigi Akshitha Goud	Rain detector alarm at home
4	20WH1A0201 20WH1A0204 20W1HA0205 20WH1A0206 20WH1A0235 20WH1A0244 21WH5A0201 21WH5A0203	Ms.A.Sony Ms. Gadde Vidyadhari Ms.N.Harini Ms.B.Geethavani Ms.K.Jahnavi Ms.B.Samatha Ms.G.Aashritha Ms.Ch.Bhavana Reddy	Simple door security alarm
5	20WH1A0203 20W1HA0208 20WH1A0209 20WH1A0223 20WH1A0230 20WH1A0231 20WH1A0232	Ms. Kariveda Sahithya Ms. Challa Nethra Ms.D.Hema Ms.K.Supriya Ms. Naredla Sai Nithya Reddy Ms. Thallapally Swetha Ms.Ritu Kumari	Short circuit protection Using Sensors

	20WH1A0241	Ms.A.Navya	
6	20WH1A0202 20WH1A0211 20WH1A0217 20WH1A0219 20WH1A0222 20WH1A0224 20WH1A0238 20WH1A0245 21WH5A0209	Ms.K.Deekshitha Ms. B. Pragnya Angel Ms.Burra Sanjana Ms.V.Saipriya Ms.K.Vasavi Ms.V.Priya Ms.Ch.Preethi Ms.N.Dharani Ms. Alluri Pavani Reddy	Automatic Street lights
7	20WH1A0220 20W1HA0225 20WH1A0226 20WH1A0237 21WH5A0213 21WH5A0215 21WH5A0220	Ms.Boda Sravanthi Ms.K.Renuka Ms. Rapelly Chandana Ms. P.Aruna Dandu Srinidhi Ms. Begari Rasagyna Ms.Kundeti Aarthi	An LED Circuit for Musical Reactions

Brief Write – Up:

The activity on "From Concept to Implementation with Prototype Models " Engaging in hardware projects with hands-on prototype building involves practical application of theoretical concepts in electronics and engineering. In addition to assisting in the implementation of small projects that contribute to project-based learning, the purpose of the activity was to find solutions to challenges that were presented in competitive tests.

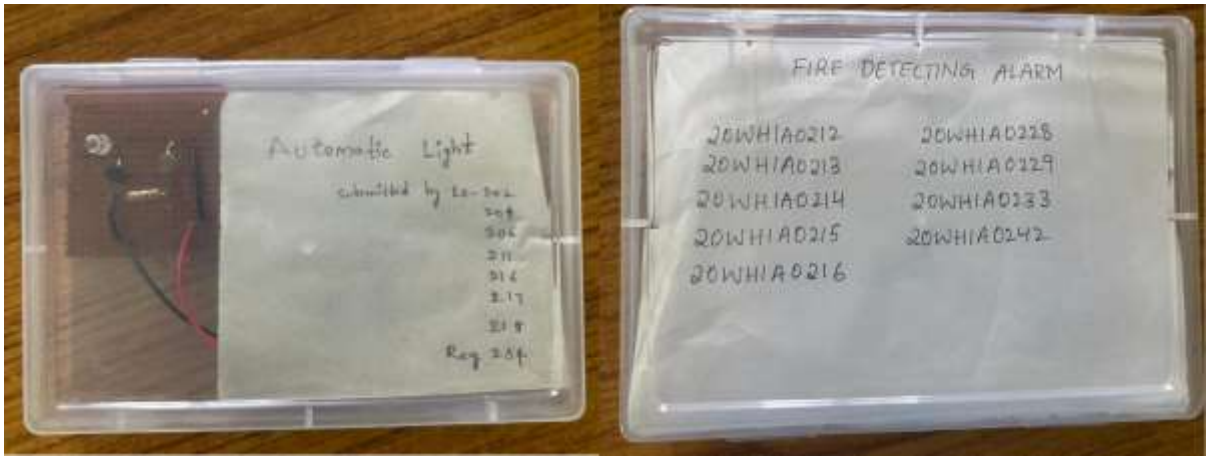
It typically includes designing circuitry, selecting components, soldering, and assembling physical prototypes. This hands-on approach fosters deep understanding of technical concepts, troubleshooting skills, and iterative improvement. Building prototypes allows for testing and validation of ideas in real-world conditions, ensuring functionality and reliability. Seven teams are used to organize the students. For the purpose of gaining expertise, each team was given a hardware project to complete and then presented their results to their juniors.

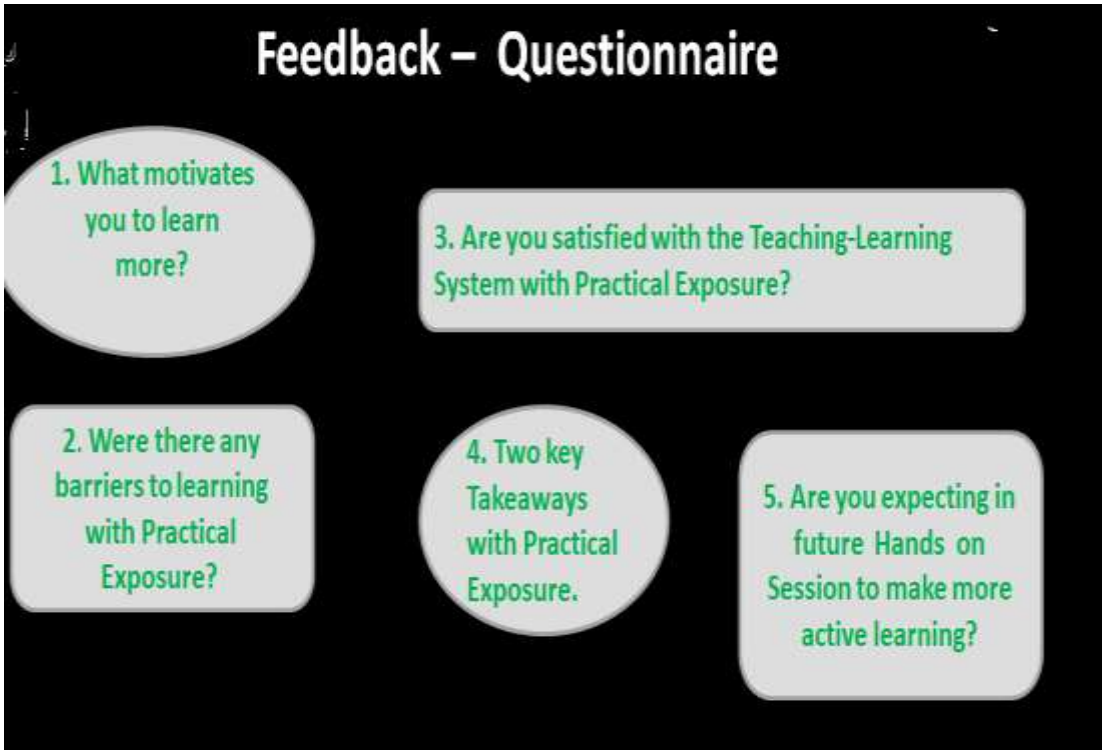
Learning Outcomes:

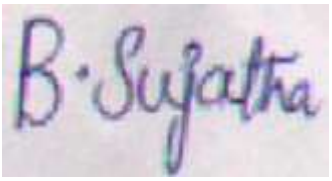
1. Familiarize with hardware skills such as soldering, building circuits on PCBs, etc.
2. Exposure on debugging skills.
3. It functions as an invaluable tool for the dissemination of knowledge.
4. Collaboration within teams enhances problem-solving abilities and creativity, often resulting in innovative solutions.
5.bridging the gap between theory and practical implementation, preparing individuals for careers in technology development and engineering.

No. of Students Participated: 65

Photos:



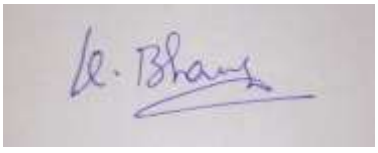




Ms.B.Sujatha

Associate Professor

EEE Department



Ms.K.Bhavya

Assistant Professor

EEE Department

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electronics and Communication Engineering

Name of the Activity: Experiential Learning

Faculty Name: Dr. R. Manojkumar

Class: II – I / EEE

Academic Year: 2023-24

Subject Name: Electrical Simulation Tools Laboratory

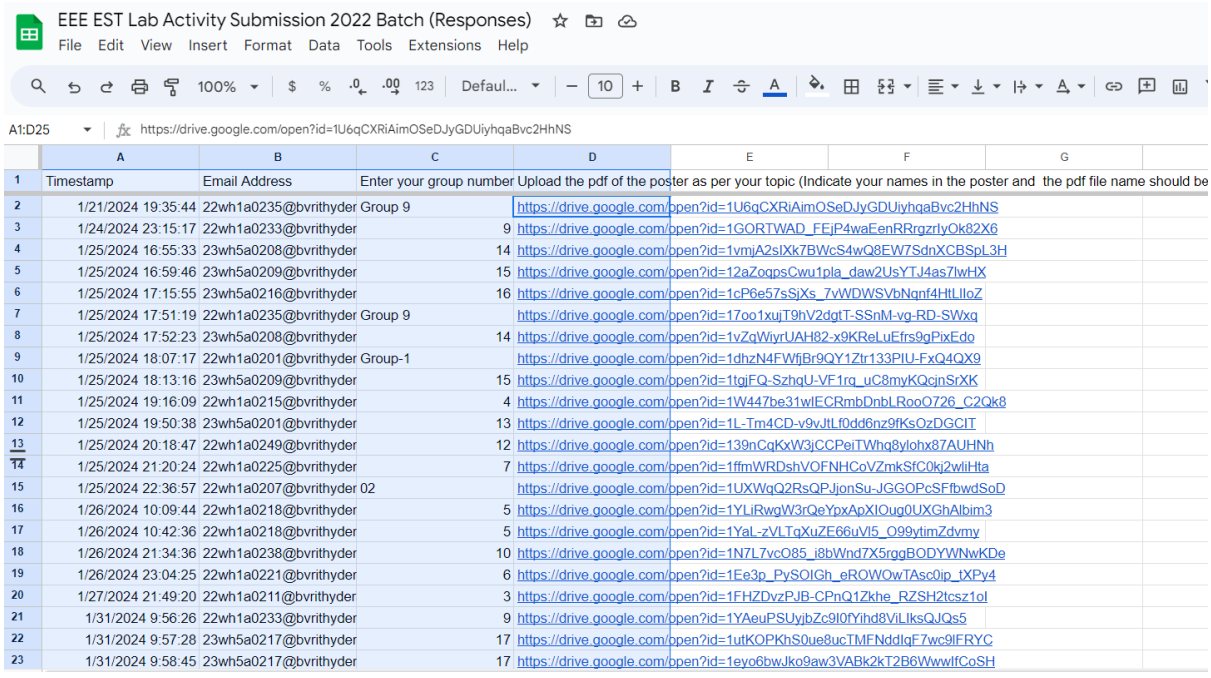
Topic: Electric Vehicles Poster Preparation

Date: 15.12.23

Write-up: As part of our experiential learning activity, students engaged in the preparation of informative and visually appealing posters on Electric Vehicles (EVs). This activity aimed to enhance students' understanding of EV technology, benefits, and challenges, while also developing their skills in research, design, and communication.

No. of Students Participated: 71

Photos:



EEE EST Lab Activity Submission 2022 Batch (Responses)

File Edit View Insert Format Data Tools Extensions Help

A1:D25 https://drive.google.com/open?id=1U6qCXRiAimOSeDJyGDUiyhqaBvc2HhNS

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1	Timestamp	Email Address	Enter your group number	Upload the pdf of the poster as per your topic (Indicate your names in the poster and the pdf file name should be			
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14	1/25/2024 21:20:24	22wh1a0225@bvrithyder	7	https://drive.google.com/open?id=1ffmWRDshVOFNHCoVZmkSfC0kj2wliHta			
15	1/25/2024 22:36:57	22wh1a0207@bvrithyder	02	https://drive.google.com/open?id=1UXWqQ2RsQPJjonSu-JGGOPcSFfbwdSoD			
16	1/26/2024 10:09:44	22wh1a0218@bvrithyder	5	https://drive.google.com/open?id=1YLiRwgW3rQeYpxApXIOug0UXGhAlbim3			
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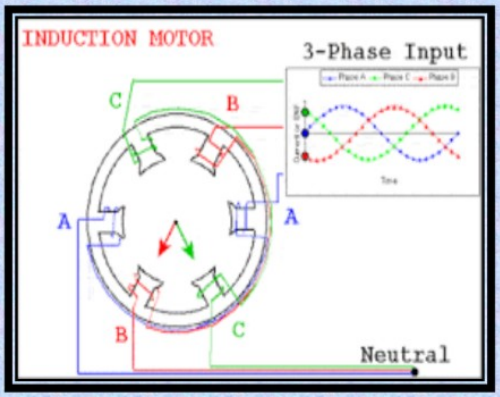
19	1/26/2024 23:04:25	22wh1a0221@bvrithyder	6	https://drive.google.com/open?id=1Ee3p_PySOIGh_eROWOwTAsc0ip_tXPy4			
20	1/27/2024 21:49:20	22wh1a0211@bvrithyder	3	https://drive.google.com/open?id=1FHZDvzPJB-CPnQ1Zkhe_RZSH2tcsz1oI			
21	1/31/2024 9:56:26	22wh1a0233@bvrithyder	9	https://drive.google.com/open?id=1YAeuPSUyjbZc9I0fYihd8ViLIksQJQs5			
22	1/31/2024 9:57:28	23wh5a0217@bvrithyder	17	https://drive.google.com/open?id=1utKOPKhS0ue8ucTMFNddIqF7wc9IFRYC			
23	1/31/2024 9:58:45	23wh5a0217@bvrithyder	17	https://drive.google.com/open?id=1eyo6bwJko9aw3VABk2kT2B6WwwIfCoSH			

BVRIT HYDERABAD COLLEGE OF ENGINEERING FOR WOMEN

Induction motor

What is an Induction Motor?

An induction motor or asynchronous motor is an AC electric motor in which the electric current in the rotor that produces torque is obtained by electromagnetic induction from the magnetic field of the stator winding.



Working Principle of Induction Motor

Faculty Sign

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electronics and Communication Engineering

Name of the Activity: Experiential Learning

Faculty Name: Dr. R. Manojkumar

Class: II – I / ECE –A

Academic Year: 2023-24

Subject Name: Network Analysis and Synthesis

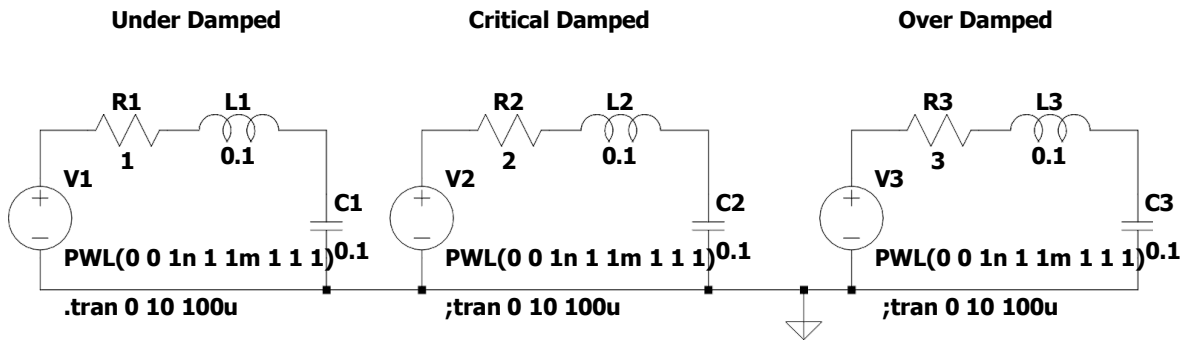
Topic: Analysis and Simulation of Series RLC Circuits

Date: 10.12.23

Write-up: This experiential learning activity focuses on designing, simulating, and analyzing underdamped, overdamped, and critically damped series RLC circuits using specified component values. The activity will be conducted in three main parts: circuit design based on roll number, simulation using LTspice, and resonance analysis using MATLAB.

No. of Students Participated: 72

Photos:



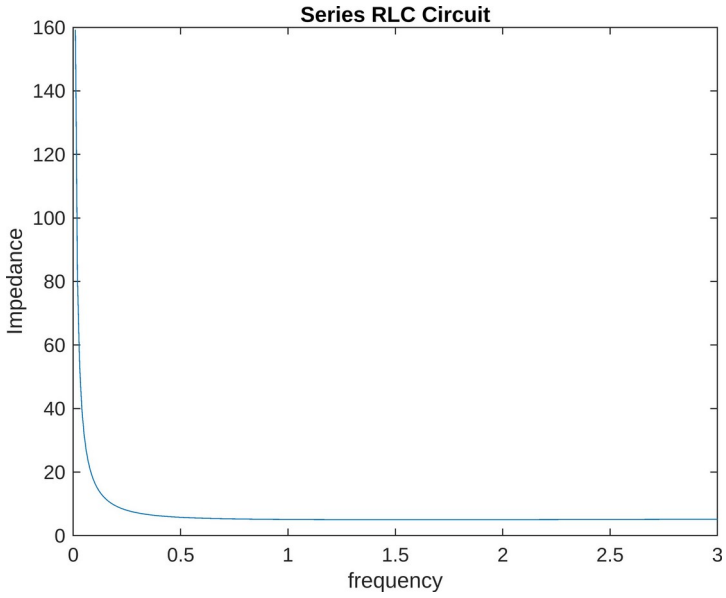
```
clc;
close all;
clear all;
r = 5;
l = 0.1;
c = 0.10;
f1 = 0:0.01:3;
f2 = 0:0.1:4;
frs = (1/(2*pi*sqrt(l*c)))
```

```
frs = 1.5915
```

```
zs= sqrt((r.^2)+((2*pi*f1*l)-(1./(2*pi*f1*c))).^2)%series impedance
```

```
zs = 1×301
       Inf   159.2272    79.7219    53.2680    40.0767    32.1903    26.9559    23.2368 ···
```

```
plot(f1,zs)
xlabel("frequency");
ylabel("Impedance");
title("Series RLC Circuit");
```




```
y=sqrt((r.^2)+((2*pi*f2*c)-(1./(2*pi*f2*l))).^2)
```

```
y = 1×41
       Inf   16.6225    9.2920    7.1540    6.2366    5.7646    5.4935    5.3257 ···
```


Faculty Sign

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electronics and Communication Engineering

Name of the Activity: Experiential Learning

Faculty Name: Dr. R. Manojkumar

Class: II – I / ECE –B

Academic Year: 2023-24

Subject Name: Network Analysis and Synthesis

Topic: Analysis and Simulation of Series RLC Circuits

Date: 10.12.23

Write-up: This experiential learning activity focuses on designing, simulating, and analyzing underdamped, overdamped, and critically damped series RLC circuits using specified component values. The activity will be conducted in three main parts: circuit design based on roll number, simulation using LTspice, and resonance analysis using MATLAB.

No. of Students Participated: 72

Photos:

NAS ACTIVITY :

Name : S.Pavani

Roll no. : 22WH1A0466

NAS question 1 :

Design the underdamped, overdamped, and critically damped series RLC circuit byfixing L and C values as given follows for unit step input.

L= (last two digits of your roll number) *10-1 H i.e., if your roll number is 22WH1A0472,then L=72*10-1 H=7.2 H, C = (last two digits of your roll number after interchanging)

***10-2 F i.e., if your roll number is 22WH1A0405, then C=50*10-2 F=0.5 F**

S : Roll number : 466

Inductor , L = 66 * 10^(-1) =

6.6 H Capacitor , C = 66 *

10^(-2) = 0.66 F

$\frac{R^2}{4L^2} \frac{1}{LC}$

Over sampling , $\frac{R^2}{4L^2} \frac{1}{LC}$

Under sampling, $\frac{R^2}{4L^2}$

Critical sampling,

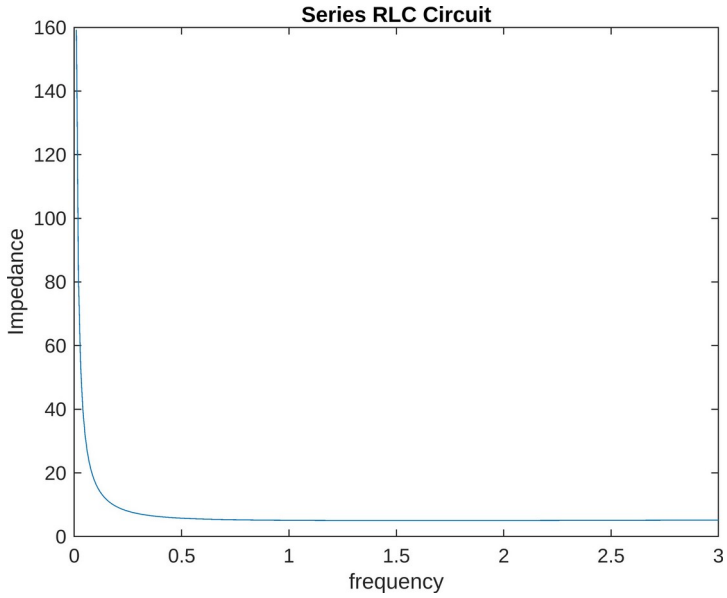
```
clc;
close all;
clear all;
r = 5;
l = 0.1;
c = 0.10;
f1 = 0:0.01:3;
f2 = 0:0.1:4;
frs = (1/(2*pi*sqrt(l*c)))
```

```
frs = 1.5915
```

```
zs= sqrt((r.^2)+((2*pi*f1*l)-(1./(2*pi*f1*c))).^2)%series impedance
```

```
zs = 1×301
       Inf   159.2272    79.7219    53.2680    40.0767    32.1903    26.9559    23.2368 ···
```

```
plot(f1,zs)
xlabel("frequency");
ylabel("Impedance");
title("Series RLC Circuit");
```




```
y=sqrt((r.^2)+((2*pi*f2*c)-(1./(2*pi*f2*l))).^2)
```

```
y = 1×41
       Inf    16.6225     9.2920     7.1540     6.2366     5.7646     5.4935     5.3257 ···
```


Faculty Sign

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women

Department of Electronics and Communication Engineering

Name of the Activity: Flipped Class Room Activity

Faculty Name: Dr. R. Manojkumar

Class: II – I / ECE –A

Academic Year: 2023-24

Subject Name: Network Analysis and Synthesis

Topic: Transient and Steady State Response

Date: 06.11.23

Write-up: The flipped classroom model proved to be highly effective for this problem-solving session. Students came prepared, having already engaged with the theoretical aspects of the problems, which enabled them to dive straight into practical application. This active learning strategy not only enhanced their problem-solving skills but also fostered a supportive and interactive learning environment.

No. of Students Participated: 72

Photos:

Faculty Sign

BVRIT HYDERABAD College of Engineering for Women

Department of Electrical and Electronics Engineering

Activity on "Visual learning: A Detailed Look at Demonstration of DC Machine and Starter"

Faculty Name: Dr. Chava Sunil Kumar **Class: II – I / EEE**

Academic Year: 2023-24

Subject Name: Electrical Machines - I (EM - I)

Topic: DC Machines construction, operation, Commutator action and Starter

Date: 22, 25 September 2023 and 17 November 2023

Brief Write-up

Visual learning plays a crucial role in understanding the intricate workings of DC machines and starters. Demonstrating these components visually can significantly enhance comprehension and retention of theoretical concepts. By observing a DC machine and starter in action, learners can gain a clearer understanding of how electrical energy is converted into mechanical energy and how starters facilitate the safe and efficient operation of DC machines.

A detailed demonstration provides a step-by-step visual guide to the internal components of a DC machine, such as the armature, commutator, field windings, and brushes. Seeing these parts in motion and understanding their interactions demystifies complex electrical principles, making them more accessible to learners. This hands-on approach not only reinforces theoretical knowledge but also prepares individuals for practical applications, ensuring they can confidently handle and troubleshoot DC machines in real-world scenarios.

Additionally, visual demonstrations of starters highlight their role in controlling the initial surge of current, protecting the DC machine from potential damage.

Learning Outcomes:

1. Visual demonstrations break down complex concepts, making them more digestible and easier to grasp.

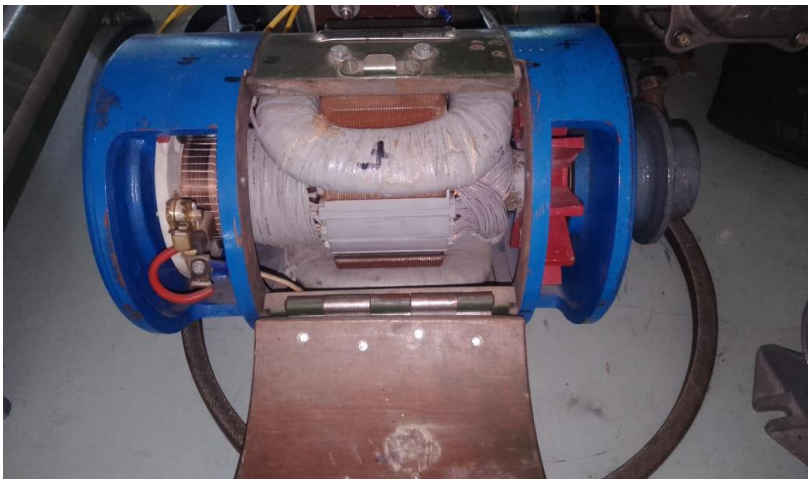
2. Visual demonstrations break down complex concepts, making them more digestible and easier to grasp.

2.Visual presentations provide a clear and tangible representation of theoretical concepts, making it easier to understand the function and interaction of each component within the DC machine and starter.

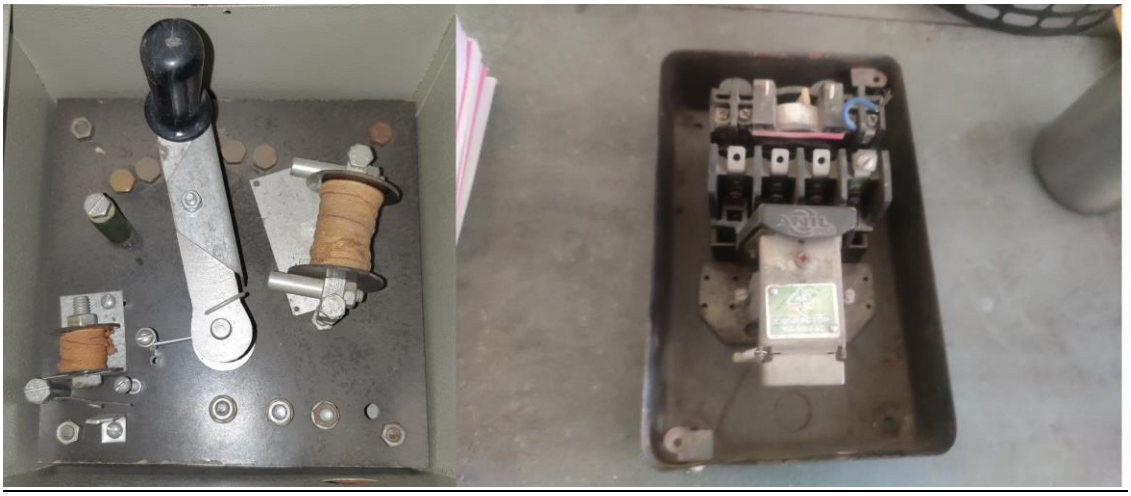
4. Visual and interactive learning methods capture and maintain students' interest more effectively than traditional lecture-based approaches. This increased engagement can lead to a deeper interest in the subject and a greater motivation to learn.

5. By incorporating visual demonstrations into the learning process, faculty can significantly enhance the effectiveness of their teaching, leading to better educational outcomes for students studying DC machines and starters.

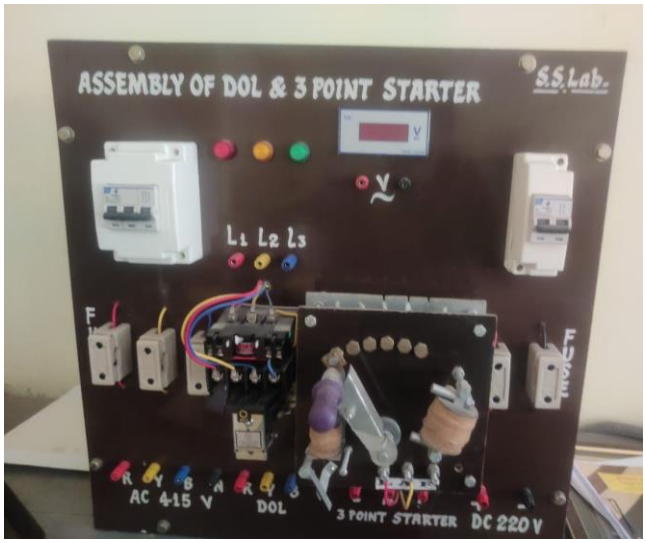
No. of Students participated: 52, 62 and 65

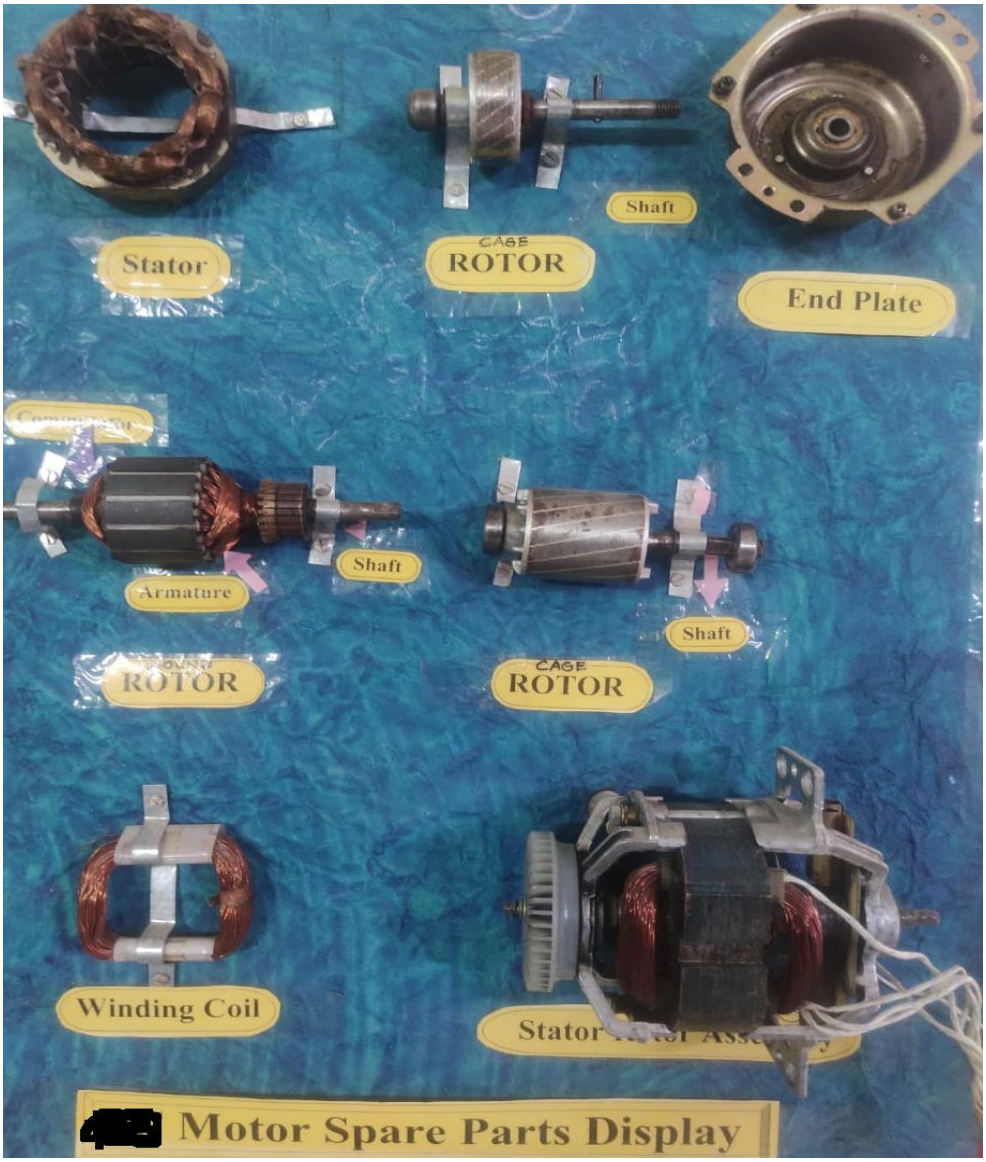


Motor Cut-section



Inside the Starter





Dr.Ch.Sunil Kumar

Professor, EEE Department

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women
Department of Electrical and Electronics Engineering

Name of the Activity : "Virtual Prototyping: Concept to Creation with Tinkercad"

Faculty Name: Dr. Chava Sunil Kumar , Ms.B.Sujatha , Mr.M.Rupesh

Class: II-I / EEE

Academic Year: 2023-2024 I Sem

Lab Name: Electrical Machines - I Lab (EM – I Lab)

Date: 08/01/2024 & 09/01/2024

Topics:

Brief Write – Up:

In the activity "Virtual Prototyping: Concept to Creation with Tinkercad," participants will explore the process of designing and simulating machine components using the Tinkercad online simulator. This hands-on session will guide learners through the creation of detailed virtual prototypes, allowing them to visualize and refine their designs in a risk-free environment. By leveraging Tinkercad's intuitive tools, participants will gain practical skills in digital prototyping, enhancing their understanding of complex electrical and mechanical systems. This activity bridges the gap between theoretical concepts and real-world applications, preparing individuals for innovative engineering challenges**.**

Through guided exercises, participants will learn to create schematic diagrams, simulate circuit behavior, and iterate on their designs for optimal performance. The session emphasizes the importance of precision and accuracy in engineering, demonstrating how virtual prototyping can save time and resources in the development process.

Tinkercad plays a crucial role in machine simulation by providing a comprehensive, accessible, and efficient platform for designing, testing, and refining machine components and systems

Learning Outcomes:

1.Collaboration within teams enhances problem-solving abilities and creativity, often resulting in innovative solutions.
2. Students will understand the importance of iterative design, using simulation to refine and improve their prototypes continuously.
3. Engaging with the Tinkercad simulator will stimulate creativity, encouraging participants to explore innovative solutions and design ideas.
4. Students will develop hands-on skills in creating virtual prototypes, allowing them to experiment with designs without needing physical components.

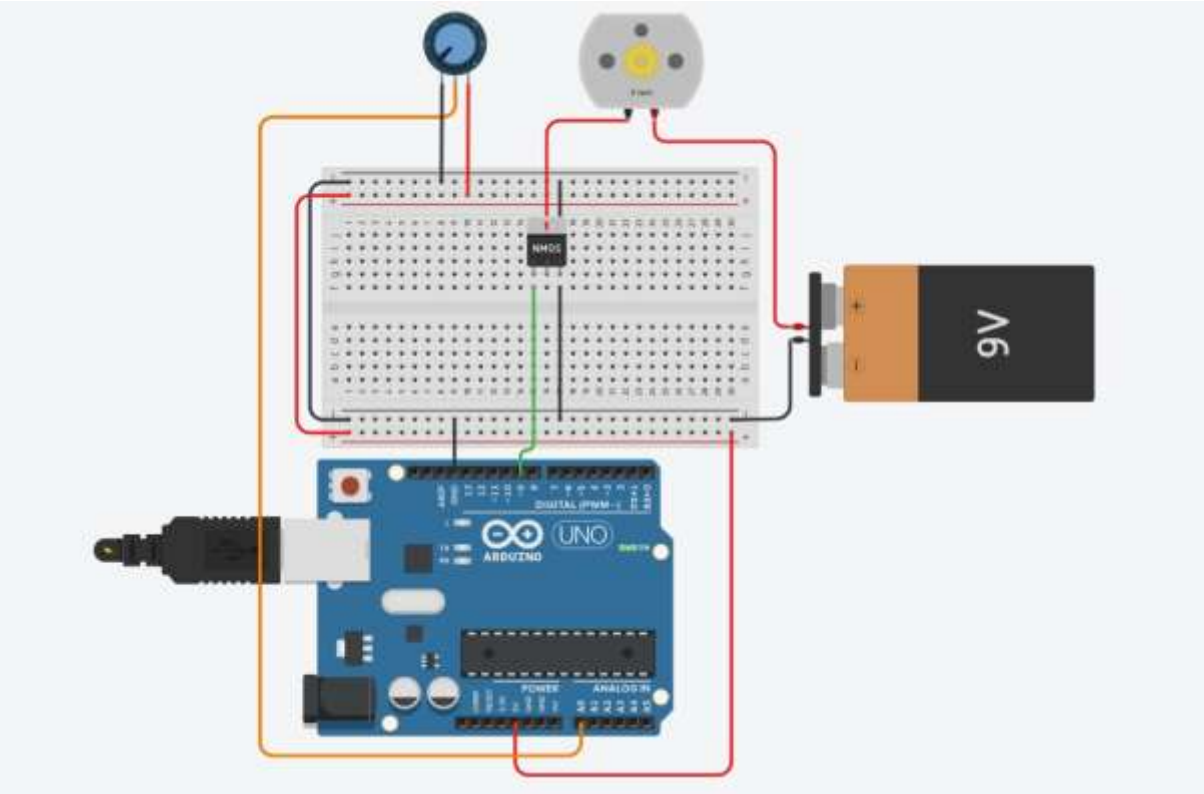
No. of Students Participated: 55

https://www.tinkercad.com/embed/2XI5zFAC02d

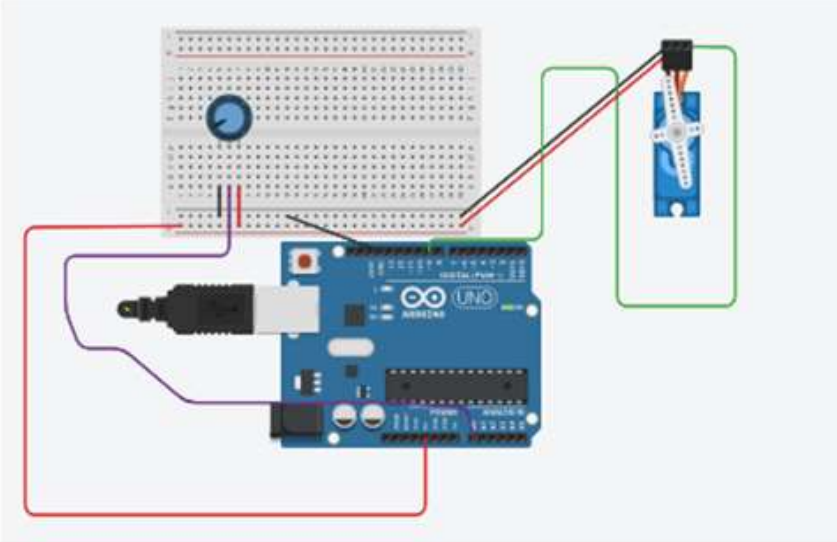
https://www.tinkercad.com/things/da5VeKYKW8B-simple-motor-control-arduino-and-l293d

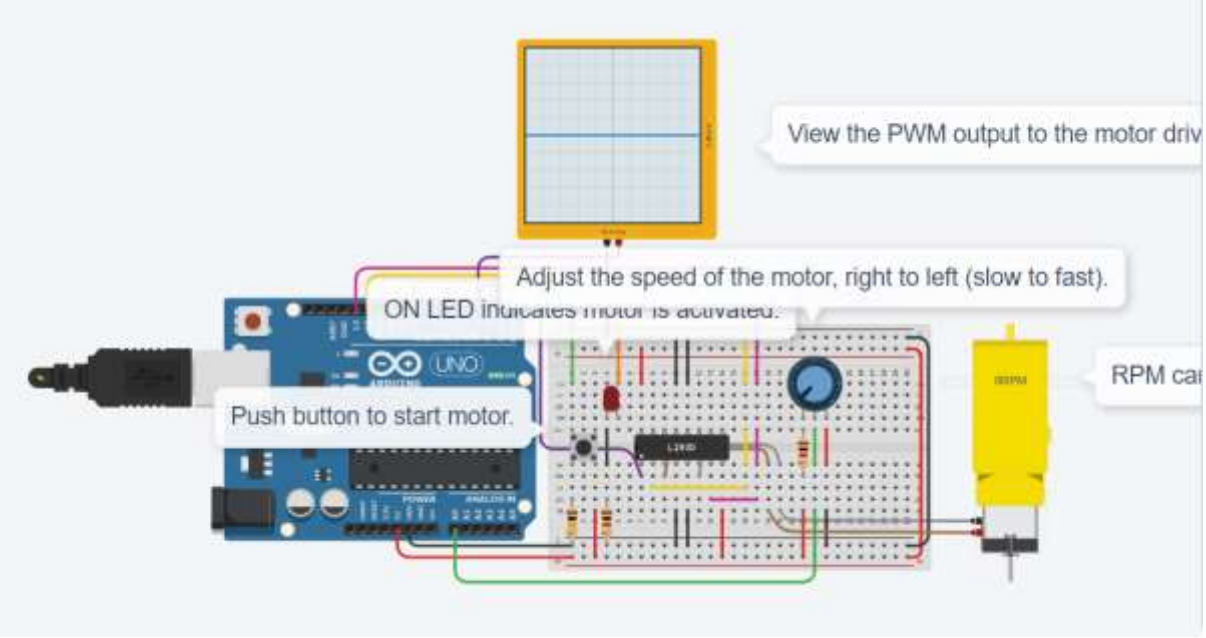
https://www.tinkercad.com/things/9dUueSQJ3js-motor-controller-using-arduino

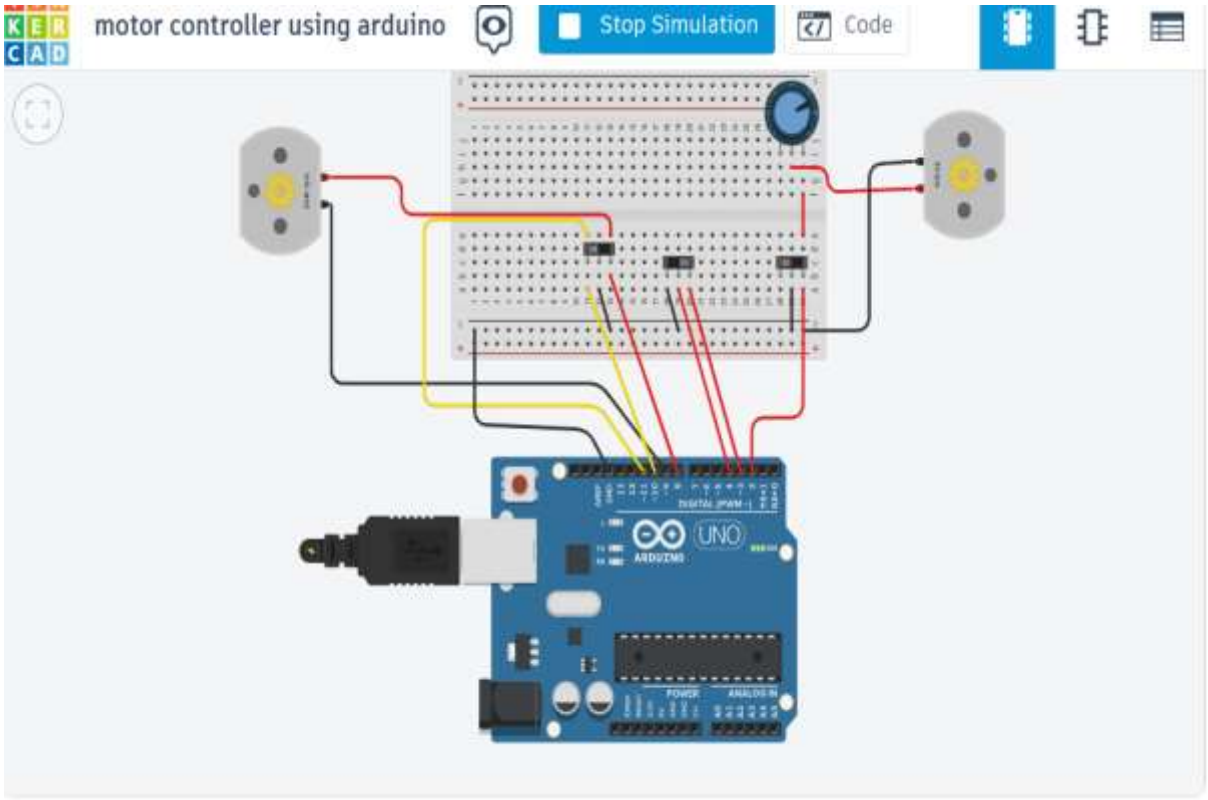
Photos:




set sensorValue to read analog pin A0
set outputValue to map sensorValue to range 0 to 180
rotate servo on pin 9 to outputValue degrees

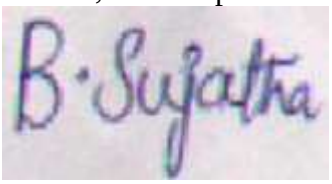



View the PWM output to the motor driv
Adjust the speed of the motor, right to left (slow to fast).
ON LED indicates motor is activated.
Push button to start motor.
RPM ca



Dr.Ch.Sunil Kumar

Professor, EEE Department



Ms.B.Sujatha
Associate Professor
EEE Department

Assistant Professor
EEE Department

BVRIT HYDERABAD College of Engineering for Women

Department of Electrical and Electronics Engineering

Name of the Activity: Preparing Posters for Electrical Circuit Analysis

Faculty Name: Dr. B. Srinivasa Rao

Class: I B.Tech (EEE), I-Semester

Academic Year: 2023-24

Activity for B.Tech (EEE), I-Semester students , A.Y. 2023-24

Overview: Activity-based learning leverages interactive and hands-on experiences to facilitate deeper understanding and retention of concepts. Using posters for circuit analysis provides a visual and collaborative way for students to grasp the fundamentals of electrical circuits, components, and their relationships. The main objective of this activity is to enhance understanding of electrical circuits through collaborative poster creation. The material required**:** Poster boards, Markers, Pens, Pencils, Circuit images, Glue or tape. The following steps involved in this activity.

1. **Introduction:** Briefly explain circuit components and laws.
2. **Group Work:** Students form small groups.
3. **Problem Assignment:** Each group receives a circuit problem.
4. **Poster Creation:** Groups draw and label circuit diagrams, showing their analysis.
5. **Presentation:** Groups present their posters and explain their findings.
6. **Discussion:** Class discusses different solutions and clarifies concepts.

Benefits:

- Visual learning aids comprehension
- Encourages teamwork and engagement
- Develops critical thinking and problem-solving skills

BVRIT HYDERABAD College of Engineering for Women
(UGC Autonomous Institution | Approved by AICTE | Affiliated to JNTUH)
(NAAC Accredited – A Grade | NBA Accredited B.Tech. (EEE, ECE, CSE and IT))
Bachupally, Hyderabad – 500090

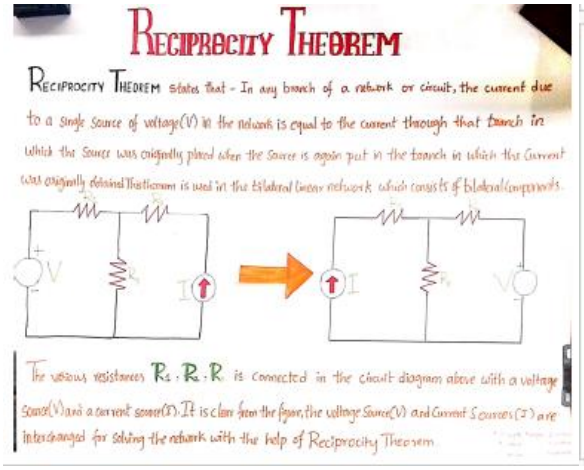
COURSE: ELECTRICAL CIRCUIT ANALYSIS-I (ECA-I)

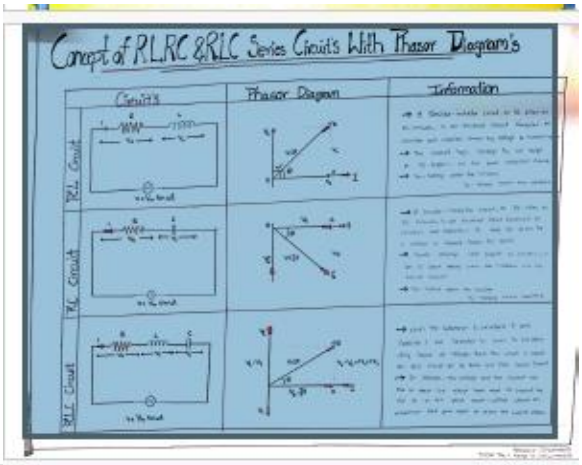
Activity for B.Tech (EEE), I-Semester students , A.Y. 2023-24

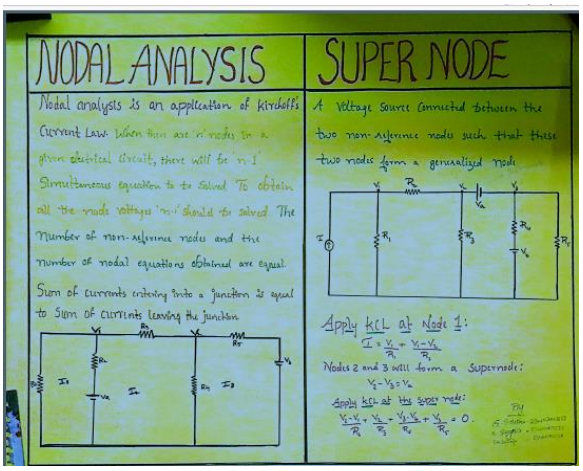
Last date for submission: 30-12-2023

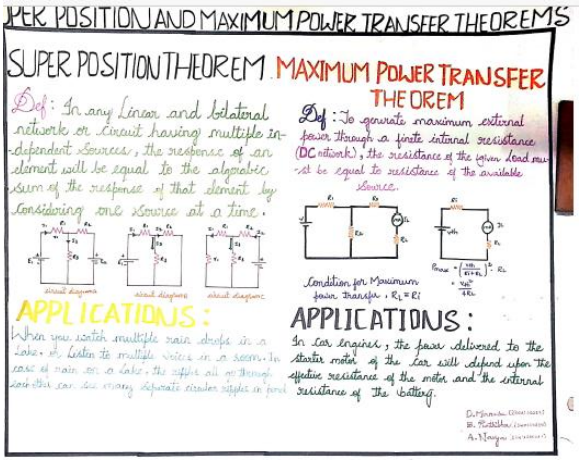
S. No	Batch Number – Roll Nos	Task – Prepare a drawing sheet (White/Color) with multiple colors
1.	I - 23WH1A0201, 23WH1A0202, 23WH1A0203	Describe all circuit elements (Active and Passive Elements)
2.	II – 23WH1A0204, 23WH1A0205, 23WH1A0206	Illustrate KCL, KVL and Ohms Law with example
3.	III – 23WH1A0207, 23WH1A0208, 23WH1A0209	Illustrate Concept Mesh analysis and Super mesh analysis
4.	IV – 23WH1A0210, 23WH1A0211, 23WH1A0212	Generation of Single phase AC voltage with diagram
5.	V – 23WH1A0213, 23WH1A0214, 23WH1A0215	Concept of RL, RC & RLC series circuits with Phasor diagrams
6.	VI – 23WH1A0216, 23WH1A0217, 23WH1A0218	RL Locus diagrams with a) R as Variable , b) L as variable
7.	VII – 23WH1A0219, 23WH1A0220, 23WH1A0221	Superposition and Maximum power transfer theorems
8.	VIII – 23WH1A0222, 23WH1A0223, 23WH1A0224	Reciprocity theorem and Tellegen's theorem for DC circuits
9.	IX – 23WH1A0225, 23WH1A0226, 23WH1A0227	Concept of Coupled circuits and series aiding and opposing
10.	X – 23WH1A0228, 23WH1A0229, 23WH1A0230	Concept of duality and dual networks
11.	XI – 23WH1A0231, 23WH1A0232, 23WH1A0233	Color coding of Resistors
12.	XII – 23WH1A0234, 23WH1A0235, 23WH1A0236	Concept of Star – Delta and Delta – Star transformations
13.	XIII – 23WH1A0237, 23WH1A0238, 23WH1A0239	Illustrate Concept Nodal analysis and Super node analysis
14.	XIV – 23WH1A0240, 23WH1A0241, 23WH1A0242	Periodic wave forms RMS value, average value, form factor & peak factor
15.	XV – 23WH1A0243, 23WH1A0244, 23WH1A0245	Concept of RL, RC and RLC parallel circuits(Admittance) with Phasor diagrams.
16.	XVI – 23WH1A0246, 23WH1A0247, 23WH1A0248	Describe the concept of Series and Parallel resonance circuits
17.	XVII – 23WH1A0249, 23WH1A0250, 23WH1A0251	Thevenin's and Norton's Theorem for AC circuits
18.	XVIII – 23WH1A0252, 23WH1A0253, 23WH1A0254	Poly phase circuits introduction and interconnections in Three phase balanced circuits.
19.	XIX – 23WH1A0255, 23WH1A0256	Measurement of 3 phase power in Balanced and unbalanced Circuits with 2 wattmeter method
20.	XX – 23WH1A0257, 23WH1A0258, 22WH1A0226	Illustrate Coupled Circuits Principle with Transformer

Few samples of the posters prepared during the activity:









Conclusion: Creating posters for circuit analysis makes learning interactive and helps students grasp complex concepts effectively.

Dr. B. Srinivasa Rao

Professor, EEE Department

BVRIT HYDERABAD College of Engineering for Women

Department of Electrical and Electronics Engineering

Activity on "Power Up: A Practical Session on Transformer Making"

Faculty Name: Dr. Chava Sunil Kumar , ,Ms.B.Sujatha, Mr.M.Rupesh

Class: II – I / EEE

Academic Year: 2023-24

Subject Name: Electrical Machines - I Lab (EM – I Lab)

Topic: Transformers construction

Date: 20th to 27th Jan 2024

Brief Write-up

Transformers are essential components in electrical systems, enabling the efficient transfer of electrical energy between circuits through electromagnetic induction. The process of making a transformer involves meticulous planning and precision to ensure optimal performance and safety. This report details the hands-on session conducted for assembling the winding and core of a transformer. The session aimed to provide practical experience in the construction of transformer components, reinforcing theoretical knowledge with real-world application. Students are able to acquire a comprehensive comprehension of the various physical components that make up a transformer, including the core, windings, insulation, and so on. The operation of electromagnetic induction within the transformer can be better understood by seeing it demonstrated with assembled pieces. This involves demonstrating the transformation of voltage and current between the main and secondary windings.

Learning Outcomes:

1.Hands-on session not only enhance learning but also inspire a deeper interest and curiosity in analysis of transformer operation.

2. Gained hands-on experience in assembling transformer components.

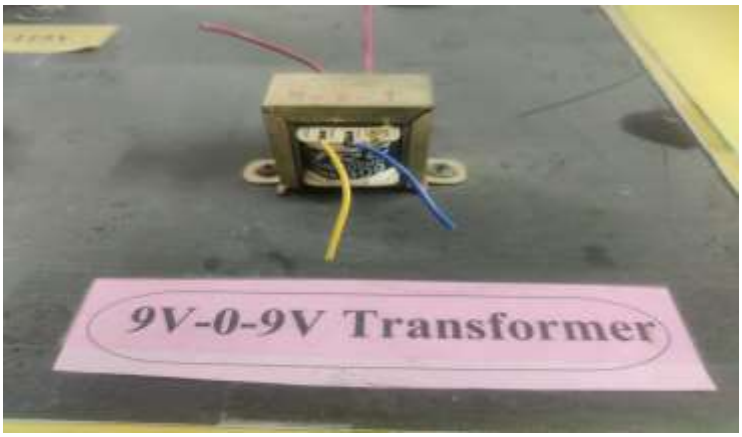
3. Students can share insights, ask questions, and learn from each other, fostering a sense of community and teamwork.

.4. This hands-on knowledge is invaluable for troubleshooting and maintenance tasks.

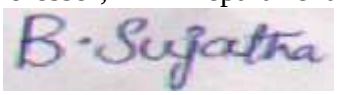
5.It bridges theoretical knowledge with practical application.

No. of Students participated: 65

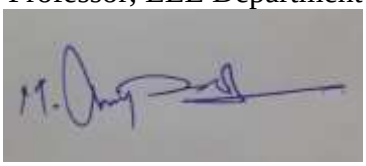
Final Prototype model of the Transformer and Transformer placed on PCB



Dr.Ch.Sunil Kumar
Professor, EEE Department



Ms.B.Sujatha
Associate Professor, EEE Department



Mr.M.Rupesh
Assistant Professor, EEE Department

(Format 4: Activities and ICT tools)

BVRIT HYDERABAD College of Engineering for Women
Department of Electrical and Electronics Engineering

Name of the Activity : "Virtual Prototyping: Concept to Creation with Tinkercad"

Faculty Name: Dr. Chava Sunil Kumar , Ms.B.Sujatha , Mr.M.Rupesh

Class: II-I / EEE

Academic Year: 2023-2024 I Sem

Lab Name: Electrical Machines - I Lab (EM – I Lab)

Date: 08/01/2024 & 09/01/2024

Topics:

Brief Write – Up:

In the activity "Virtual Prototyping: Concept to Creation with Tinkercad," participants will explore the process of designing and simulating machine components using the Tinkercad online simulator. This hands-on session will guide learners through the creation of detailed virtual prototypes, allowing them to visualize and refine their designs in a risk-free environment. By leveraging Tinkercad's intuitive tools, participants will gain practical skills in digital prototyping, enhancing their understanding of complex electrical and mechanical systems. This activity bridges the gap between theoretical concepts and real-world applications, preparing individuals for innovative engineering challenges**.**

Through guided exercises, participants will learn to create schematic diagrams, simulate circuit behavior, and iterate on their designs for optimal performance. The session emphasizes the importance of precision and accuracy in engineering, demonstrating how virtual prototyping can save time and resources in the development process.

Tinkercad plays a crucial role in machine simulation by providing a comprehensive, accessible, and efficient platform for designing, testing, and refining machine components and systems

Learning Outcomes:

1.Collaboration within teams enhances problem-solving abilities and creativity, often resulting in innovative solutions.
2. Students will understand the importance of iterative design, using simulation to refine and improve their prototypes continuously.
3. Engaging with the Tinkercad simulator will stimulate creativity, encouraging participants to explore innovative solutions and design ideas.
4. Students will develop hands-on skills in creating virtual prototypes, allowing them to experiment with designs without needing physical components.

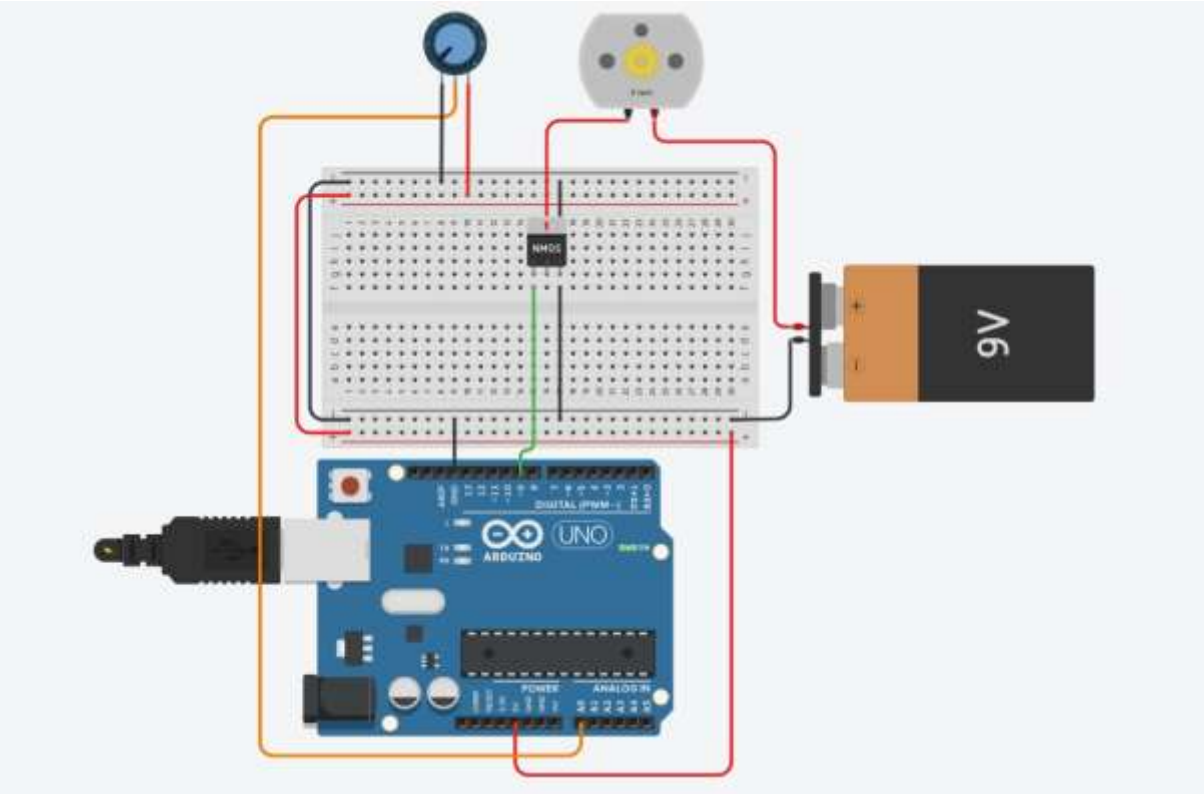
No. of Students Participated: 55

https://www.tinkercad.com/embed/2XI5zFAC02d

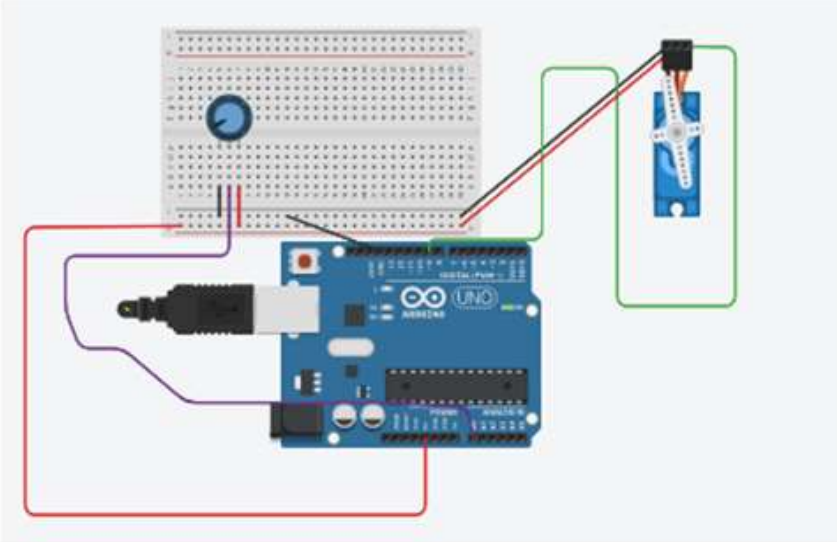
https://www.tinkercad.com/things/da5VeKYKW8B-simple-motor-control-arduino-and-l293d

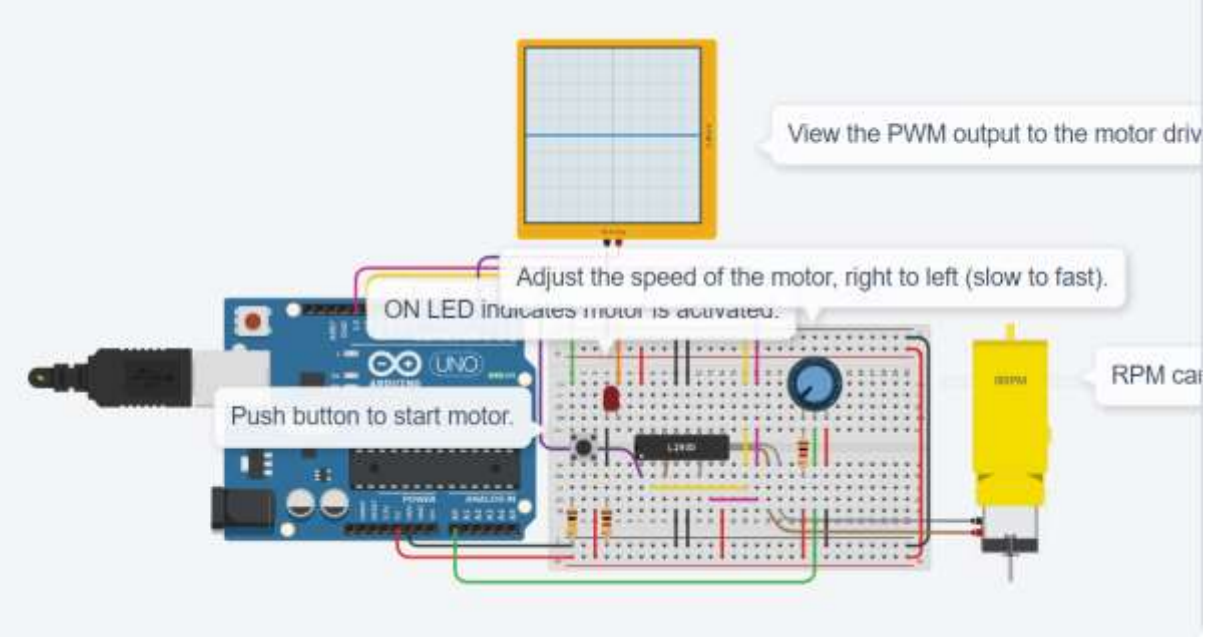
https://www.tinkercad.com/things/9dUueSQJ3js-motor-controller-using-arduino

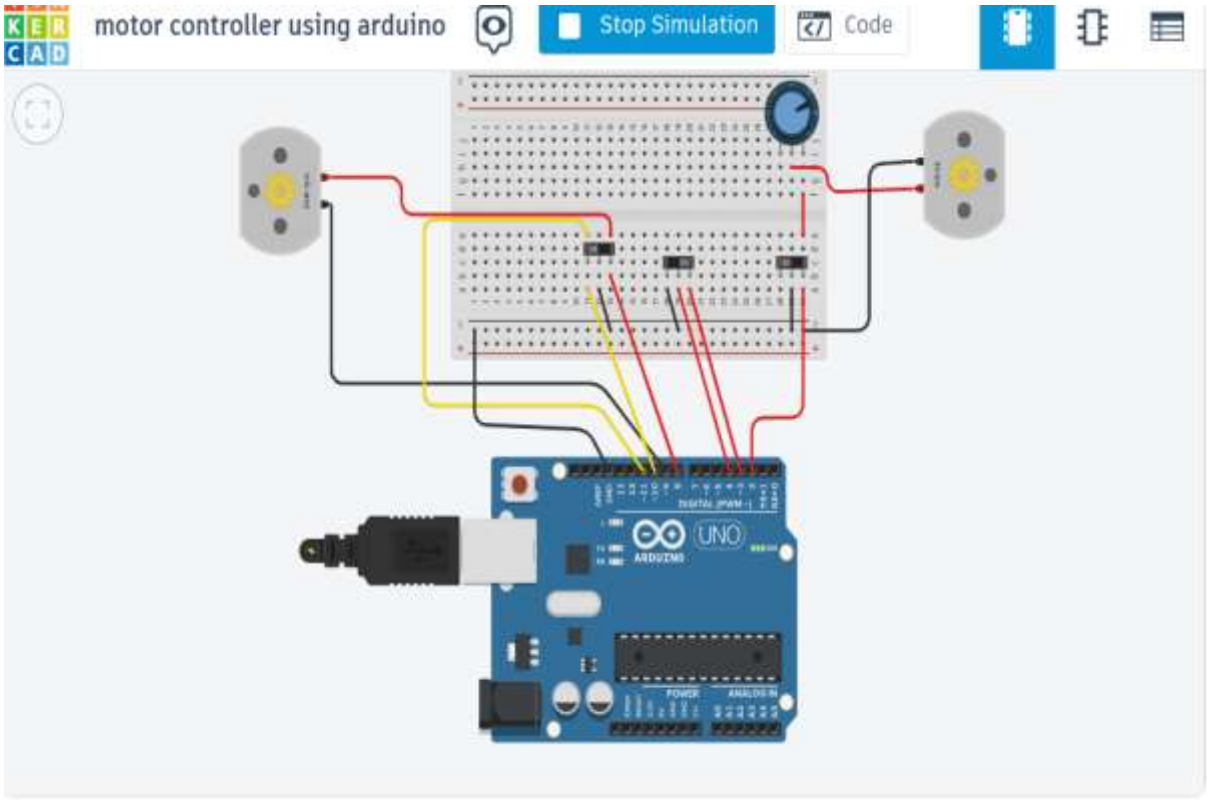
Photos:




set sensorValue to read analog pin A0
set outputValue to map sensorValue to range 0 to 180
rotate servo on pin 9 to outputValue degrees

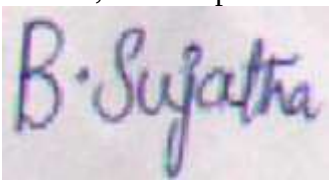



View the PWM output to the motor driv
Adjust the speed of the motor, right to left (slow to fast).
ON LED indicates motor is activated.
Push button to start motor.
RPM ca



Dr.Ch.Sunil Kumar

Professor, EEE Department



Ms.B.Sujatha
Associate Professor
EEE Department

Assistant Professor
EEE Department

BVRIT HYDERABAD College of Engineering for Women
Department of Electronics and Communication Engineering

Name of the Activity: Live Quiz

Faculty Name: Dr. Prasanta Kumar Jena

Class: II – II / EEE

Academic Year: 2023-24

Subject Name: Measurements and Instrumentation

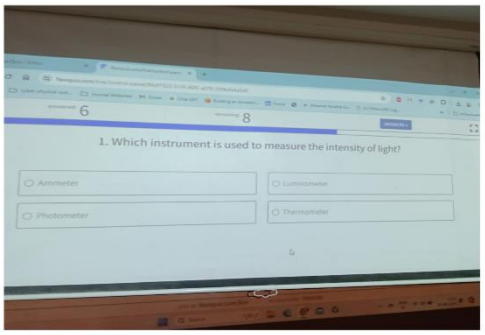
Topic: Different types of measuring instruments

Brief Write – Up: All the students have been assigned to prepare a poster on chart paper elaborating working principle, advantages and disadvantages of the measuring instruments

Date: 15/04/2024

No. of Students Participated: 54

Photos: A live quiz was conducted to make fun and create curiosity among students to know about the subject and analyze their knowledge regarding the subject.



Prasanta Kumar Jena

Faculty Sign

BVRIT HYDERABAD College of Engineering for Women

Department of Electrical & Electronics Engineering

Name of the Activity: Peer to Peer Learning

Faculty Name: Class: III – I / ECE A & B

Academic Year: 2023-24

Subject Name: Control Systems

Topic: Finding Transfer function for Mechanical, Electrical & Block diagram Technique and Signal Flow graph

Date: Brief Write – Up

Peer learning is basically a cognitive relationship between an expert and a novice as the apprentice. According to the learning situation and nature of the learning it can be divided into 5.

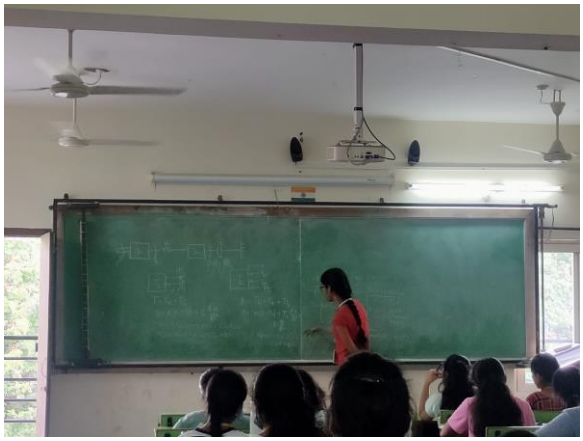
1. Same age peer tutoring.
2. Cross age peer tutoring.
3. Class wide peer tutoring.
4. Incidental peer tutoring.
5. Structured peer tutoring.

The students are given with following guidelines

1. All the Students Are given a unique question as assignment to solve.
2. Students are given instruction that they can use any sources to solve the problem.
3. After completing the problem they should upload the problem in a given google drive.
4. Some of the students are asked to teach/explain the problem on board to their friends in the presence and absence of the Course coordinator.

No. of Students Participated: 120

Photos:



BVRIT HYDERABAD College of Engineering for Women

Department of Electrical and Electronics Engineering

Name of the Activity: Quiz

Faculty Name: Dr. Chava Sunil Kumar **Class: II – I / EEE**

Academic Year: 2023-24

Subject Name: Electrical Machines - I (EM - I)

Topic: Pre-Requisites, Unit-I, Unit-II, Unit-IV, Unit-V of EM-I

Date: 13 October 2023, 8 November 2023, 23 November 2023, 23 January 2024, 23 January 2024.

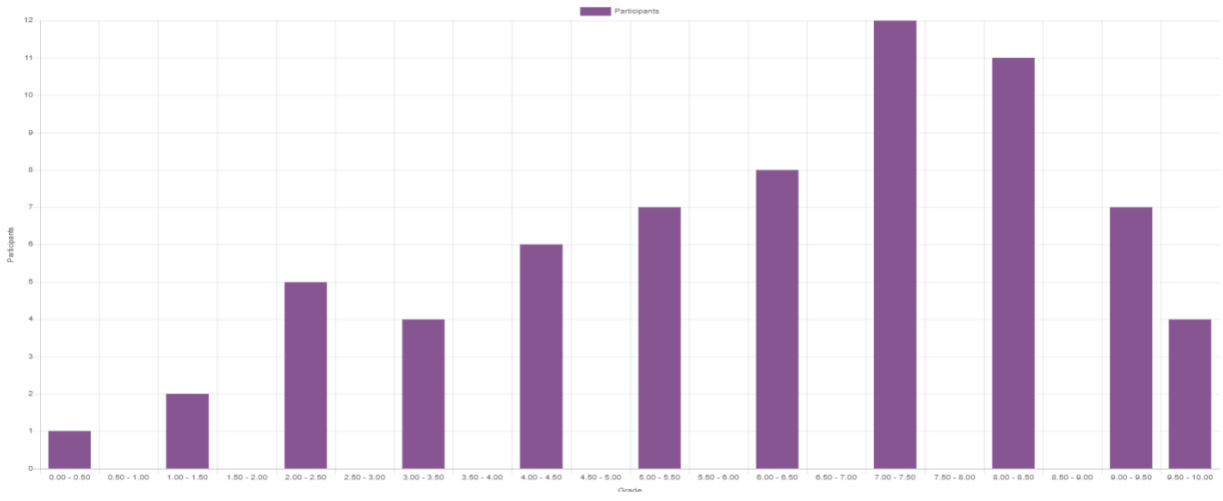
Brief Write-up

Moodle is one of the Learning Management System (LMS) where we can incorporate required additional tools which are used for teaching learning activities. Quiz is one of the powerful tool to monitor and diagnose the student performance with certain types of knowledge. Using this tool effectively can boost your course's effectiveness, and promote student performance. The quiz is scheduled in the Moodle with time limits and informed the same who students who were added in the Moodle course and the quiz is consisting of Multiple-choice questions with easy, moderate and hard levels.

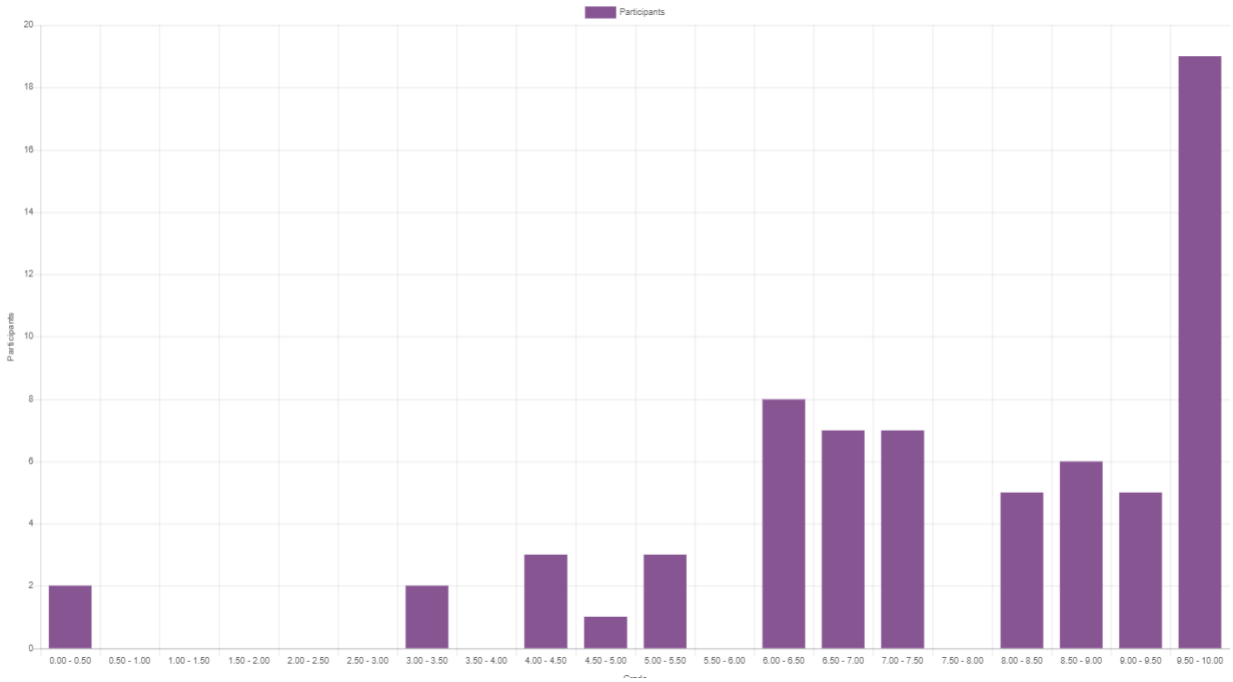
The advantages of Online Quiz in Moodle are as follows.

1. Students can be engaged remotely in an attractive mode
2. At the same time large number of students can take the test.
3. The questions and options are randomized.
4. Results and summary of quiz with correct options can be displayed immediately after completing the quiz.
5. Faculty can analyze the students understanding levels with the results immediately.

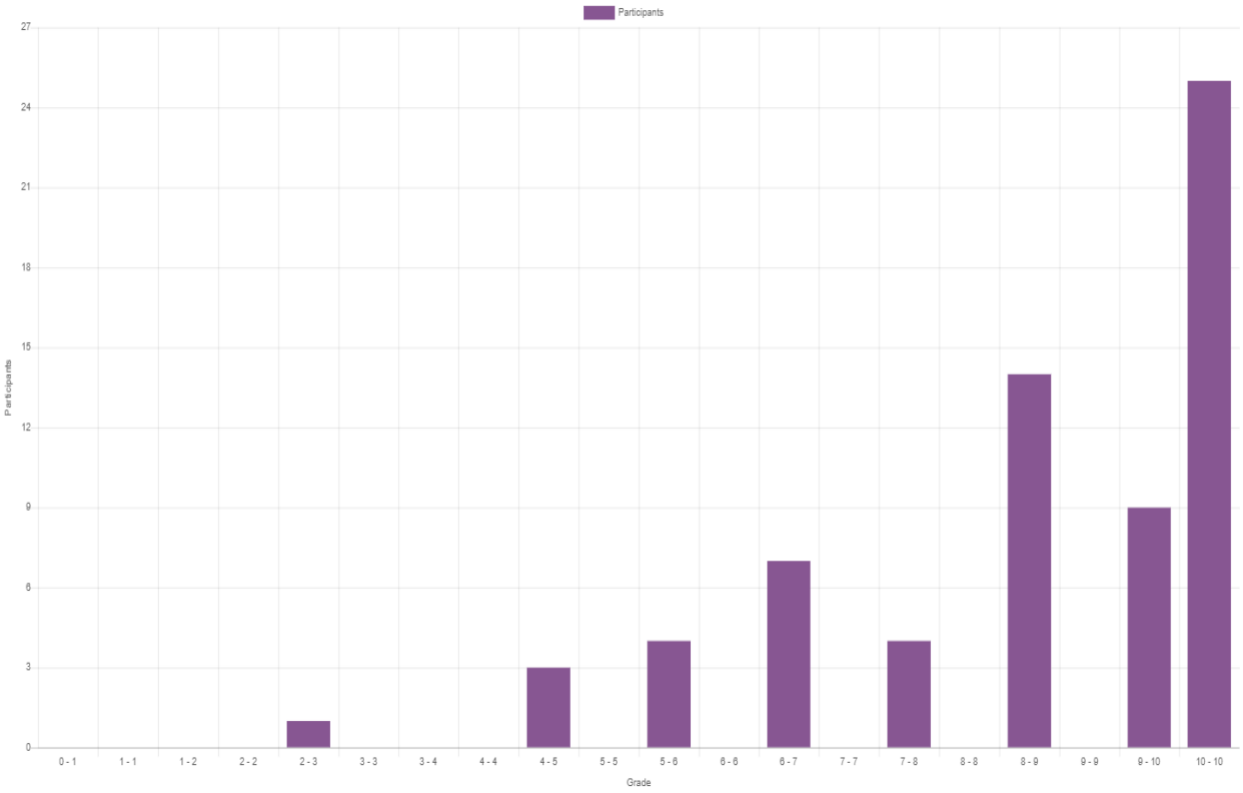
Prerequisites Quiz, No. of Students participated: 67



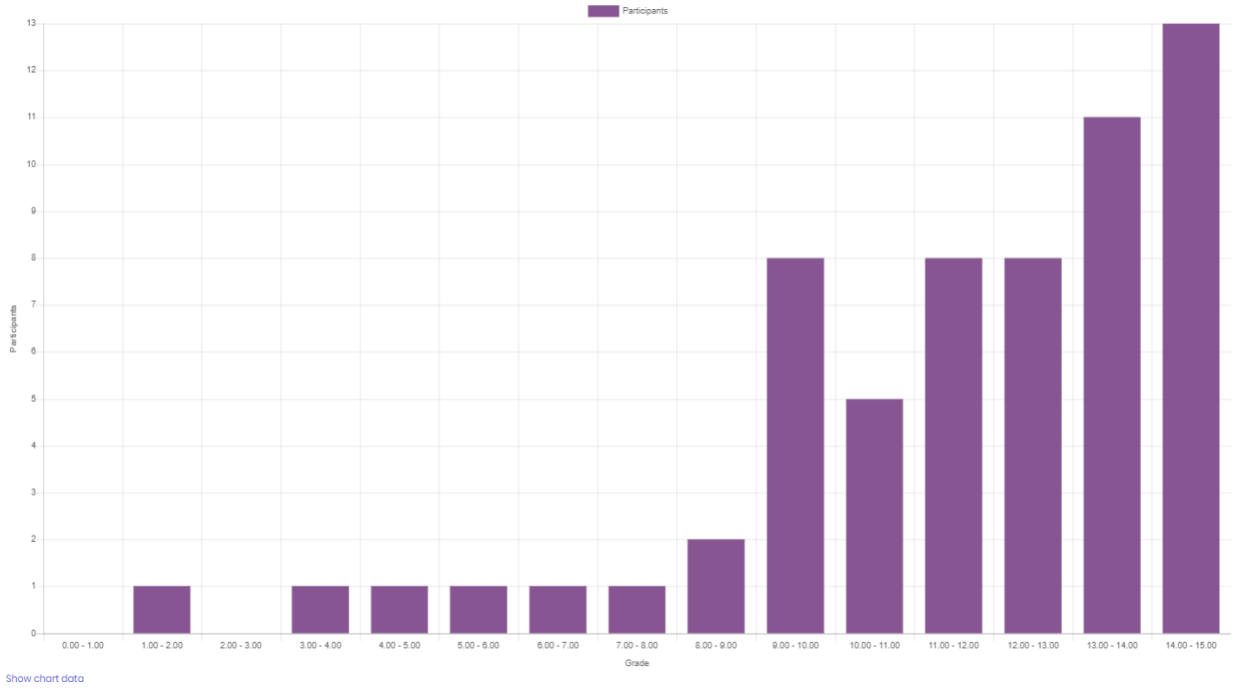
Unit-I Quiz, No. of Students participated: 68



Unit-II Quiz, No. of Students participated: 61



Unit-IV Quiz, No. of Students participated: 67



Show chart data

Unit-V Quiz, No. of Students participated: 67