



BVRIT HYDERABAD
College of Engineering for Women

Department of Information Technology
Guest Lecture on Exploring the role of Digital Signatures in Real Time applications
under TechBlitz

Program Name	: Guest Lecture on Exploring the role of Digital Signatures in Real Time applications
Program Date	: 06 th October 2023
Venue	: BVRIT HYDERABAD College of Engineering for Women, Seminar Hall, Diamond Block.
Resource Person	: Dr.Nikhil Tripathi,Asst.Prof, IIIT Sri City, Tirupati.
Participants	: 385 (IV IT-130, IV CSE-195 & IV AIML-60)

BVRIT HYDERABAD College of Engineering for Women, Department of Information Technology organized Guest Lecture on “Exploring the role of Digital Signatures in Real Time applications” by **Dr.Nikhil Tripathi**, Asst. Prof, IIIT Sri city under **TechBlitz** on 06th **October 2023**.

Topics Covered during the session are:

- 1) Digital Signatures
- 2) Authentication
- 3) Message Digest
- 4) Public Key certification Authorities
- 5) Secure E-Mail
- 6) Security system services

All the topics are covered with real time examples. At the end of the session, feed-back was taken by all students.

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BVRIT HYDERABAD
College of Engineering for
UCC Autonomous Institution
Approved by AICTE (Affiliated to JNTU) Accredited with Grade 'A', Accredited by NBA for 3 years
Department of Information
Guest Lecture
by
Dr. Nikhil Trij
Assistant Professor at IIIT Sri C
ON



Exploring the role of Digital Signatures in Real-Time Applications

Internet checksum: poor crypto hash function


Internet checksum has some properties of hash function:

- produces fixed length digest (16-bit sum) of message
- is many-to-one

but given message with given hash value, it is easy to find a message with same hash value.

Need for certified public keys

- motivation: **Trudy plays pizza prank on Bob**
- Trudy creates e-mail order:
Dear Pizza Store, Please deliver to me four pepperoni pizzas. Thank you, **Bob**
- Trudy signs order with her private key
- Trudy sends order to Pizza Store



Public key Certification Authorities (CA)

- **certification authority (CA)**: binds public key to particular entity
- entity (person, website, router) registers its public key with CA
- CA creates certificate binding identity E to E's public key
- certificate containing E's public key digitally signed by CA: CA says "public key"

Secure e-mail: confidentiality

Alice wants to send *confidential* e-mail, m , to Bob.



Secure e-mail: integrity, authentication

Alice sends m to Bob, with confidentiality, message integrity, and authentication.

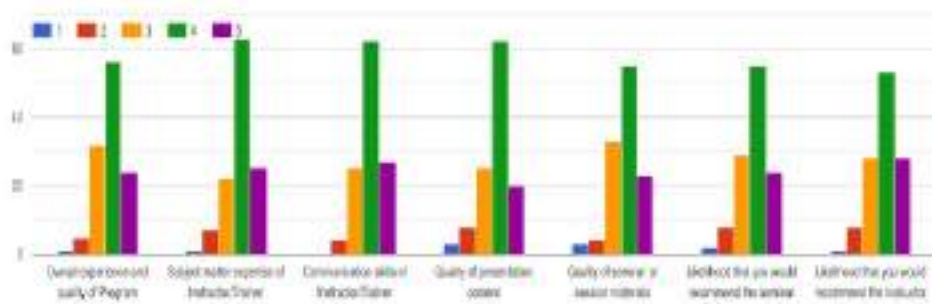


Five services for security systems

- Confidentiality
- Integrity
- Availability
- Non-repudiation
- Accountability

Feedback Report:

(Feedback & Ratings: Please rate the following elements of the Guest Lecture program. We value your candid and open assessment, and will use your feedback to improve and refine future sessions. Rating Scale: 1: Poor, 2: Fair, 3: Average, 4: Good, 5: Excellent





BVRIT HYDERABAD College of Engineering for Women
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Bachupally, Hyderabad-500090

Department of Information Technology

Date: 04.10.2023

To
The Principal,
BVRIT HYDERABAD
College of Engineering for Women,
Hyderabad.

Through Proper Channel

Respected Madam,

Sub: Request for conducting Guest Lecture on **“Exploring the Role of Digital Signatures in Real-Time Applications”**– Regarding.

This is to bring to your kind notice that Department of IT is planning to conduct Guest Lecture on **“Exploring the Role of Digital Signatures in Real-Time Applications”** by **Dr. Nikhil Tripathi**, Assistant Professor at IIIT Sri City, Tirupathi on 06th October 2023 (Friday) from 10.30 AM to 12.00 Noon for IV B. Tech I Semester students. .

Kindly sanction permission for conducting the above said Guest Lecture.

Thanking you madam,

Faculty Coordinator

Anand *K. Srikar*
Mr. N. Anand & Mr. K. Srikar Goud
Assistant Professor,
Dept. of IT



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Departments of Information Technology

Lr. No: BVRITH/A/IT/GL/2023-24/2

CIRCULAR

Date: 04.10.2023

All IV B. Tech I Semester of IT / CSE / CSE(AIML) students are requested to attend the Guest lecture on “Exploring the Role of Digital Signatures in Real-Time Applications” by Dr. Nikhil Tripathi, Assistant Professor at IIIT Sri City, Tirupathi on 06th October 2023 from 10.30 AM to 12.00 Noon.


HoD- IT


Principal

Copy To:

- 1. All HoD's

Circulation:

Year / Sem	IT-A	IT-B	CSE-A	CSE-B	CSE-C	CSE (AIML)
IV / I	