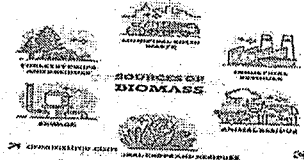
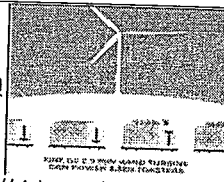




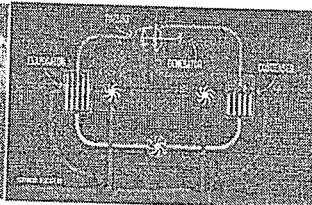
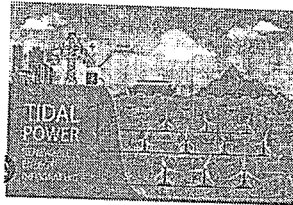
Academic Year	2024-25 (EVEN)
Name of the Faculty	Mr. Rajesh G.L
Course Name/type /Code	RENEWABLE ENERGY POWER PLANTS/THEORY/BME654B
Sem/Section/st ream	VI/CCE
	<p style="text-align: center;">1. Power-point Presentation,</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="396 733 598 899"> <p>Renewable Energy Sources: Module - I</p> </div> <div data-bbox="604 733 786 899"> <p>Module - II: Solar Energy</p> </div> <div data-bbox="792 733 1014 899"> <p>Solar Radiation Measurements</p> <ul style="list-style-type: none"> It is important to monitor the radiation, owing to the increasing number of solar heating and cooling applications, and the associated for accurate solar radiation data to provide performance. Types of Solar Radiation measuring devices Pyranometer Pyrometer Pyrheliometer Solar heat meters </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div data-bbox="396 975 638 1141"> <p>Availability of wind energy in India</p> </div> <div data-bbox="645 975 840 1141"> <p>Module - IV: I: Tidal Power</p> </div> <div data-bbox="846 975 1055 1141"> <p>Module - II: Green Energy</p> <p>Transition, fuel mix, climate change, and the role of hydrogen energy. Hydrogen production technologies (currently natural gas, biomass, water electrolysis) and hydrogen energy problems associated with hydrogen energy.</p> </div> </div> <p style="text-align: center; margin-top: 20px;">2. Videodemonstration or Simulations,</p> <div style="display: flex; justify-content: space-between;"> <div data-bbox="403 1323 665 1489"> <p>What Are Sources of Energy? Energy Explained</p> <ul style="list-style-type: none"> https://www.youtube.com/watch?v=VIXYT8cdzE8 <p>can renewable energy power 100%</p> <ul style="list-style-type: none"> https://www.youtube.com/watch?v=RnvCbquYelM </div> <div data-bbox="672 1323 907 1489"> <p>ENERGY AVAILABLE IN INDIA</p> <ul style="list-style-type: none"> https://powermin.gov.in <p>How much electricity does it take to power the world?</p> <ul style="list-style-type: none"> https://www.youtube.com/watch?v=etIwrG4Deh8t </div> <div data-bbox="913 1315 1209 1504"> <ul style="list-style-type: none"> Sustainable Energy Challenges https://www.youtube.com/watch?v=vmEu7LgcZIk Why Sustainable Energy Is Important - Definition of Sustainable Energy https://www.youtube.com/watch?v=pU3EdaaFWE </div> </div>

Difference between renewable and sustainable energy.

- <https://www.youtube.com/watch?v=TsmNA0vRQbU>
- <https://www.worldometers.info/energy>



<https://giphy.com/explore/wind-turbines>



energy/

<https://indiaenergyportal.org/green-energy/>

Web links and Video Lectures (e-Resources):

- E-book URL: <https://www.pdfdrive.com/non-conventional-energy-sources-e10086374.html>
- E-book URL: <https://www.pdfdrive.com/non-conventional-energy-sources-ntel-d17376903>
- E-book URL: <https://www.pdfdrive.com/renewable-energy-systems-ntel-d17376903>
- E-book URL: <https://www.pdfdrive.com/lecture-notes-on-renewable-energy-sources-e34339>
- https://onlinecourses.nptel.ac.in/noc18_ge09/preview

Hoje

Course Incharge Name & Signature

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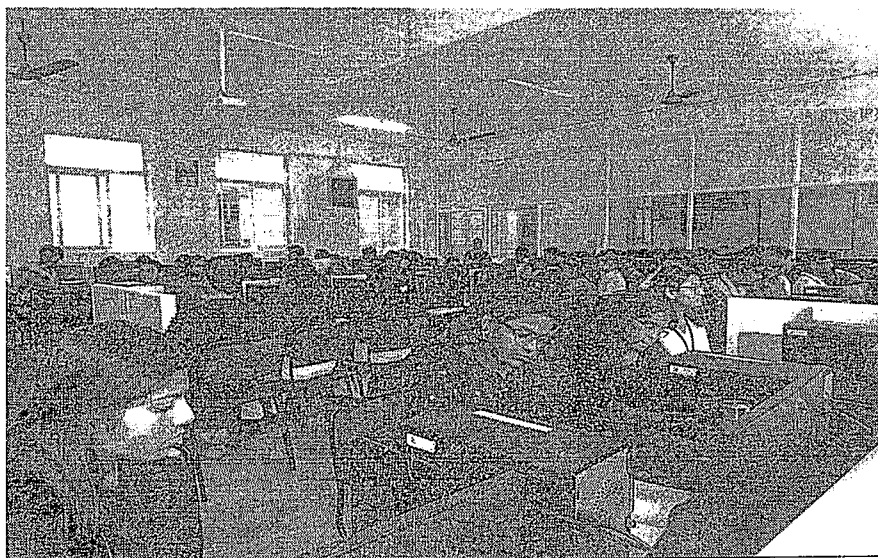
HOD

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Academic Year	2024-25 (ODD)
Name of the Faculty	Dr.Chanda V Reddy
Course Name /Code	BLOCKCHAIN TECHNOLOGY /BCS613A
Semester	VI
Activity Name	HANDS – ONACTIVITY
Topic Covered	Generating Ethereum Clients, Wallets and Transactions
Date	27/03/2025
No. of Participants	59
Objectives/Goals	<ul style="list-style-type: none">• To create practical implementation awareness• To generate practical Knowledge• To use modern tool
ICT Used	PPT and Systems
Appropriate Method/Instructional materials/Exam Questions <ul style="list-style-type: none">• Lab session	
Relevant PO's	5, 9,10,12
Significance of Results/Outcomes	<ul style="list-style-type: none">• Hands-on gives knowledge in depth.• Hands-on gives practical knowledge
Reflective Critique	<ul style="list-style-type: none">• The activity improved the learning and communication skills of students• The activity provided a platform for students to interact with peers, improve their communication skills and work as individuals.• Learnt modern tool for implementation

Proofs : Report is attached

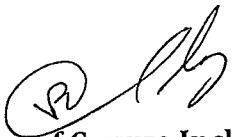




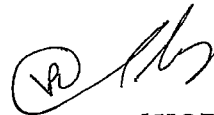
Bengaluru, Karnataka, In...

303, Layout Raghuvanahalli, Bangalore City
Municipal Corporation Layout, Bengaluru,
Karnataka 560062, India
Lat 12.87891° Long 77.544843°
27/03/25 10:52 AM GMT +05:30

Google



Signature of Course Incharge



Signature of HOD CCE

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Bengaluru - 560 109.*

Ethereum Transactions

An Ethereum transaction is a cryptographically signed data message that initiates an action on the Ethereum network, such as transferring Ether or interacting with a smart contract, and is recorded on the blockchain. The process begins with an Externally Owned Account (EOA), controlled by a user with a private key, initiating the transaction. Key components of a transaction include the sender's Ethereum address, the recipient's address, the value (amount of Ether to be transferred, in Wei), any additional data needed for smart contract execution, and the gas fee. Gas is the fee paid in Ether to incentivize miners to process the transaction, with the gas price determining the cost per unit and the gas limit setting the maximum amount the sender is willing to pay.

There are different types of Ethereum transactions, such as normal transactions, where an EOA sends ETH directly to another EOA, internal transactions, which involve a smart contract as an intermediary, and token transfers, which involve ERC-20 or ERC-721 tokens. The transaction is signed with the sender's private key to ensure its authenticity, preventing unauthorized spending. Once signed, the transaction is broadcast to the Ethereum network, where validators (or miners) verify its validity and include it in a block. Once confirmed and added to a block, the transaction becomes immutable, permanently recorded on the blockchain.

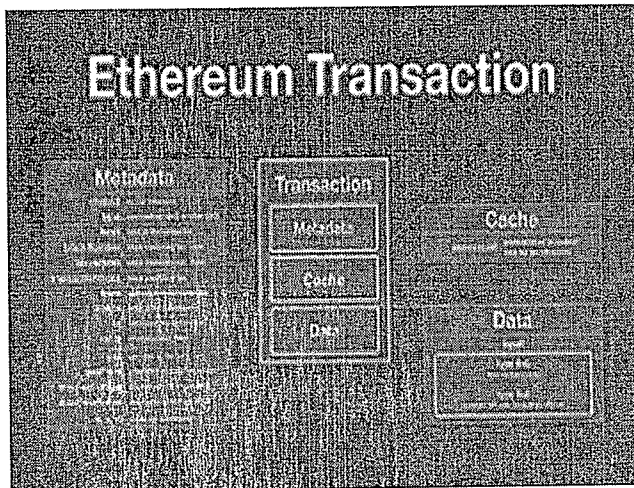


Fig: Ethereum Transaction

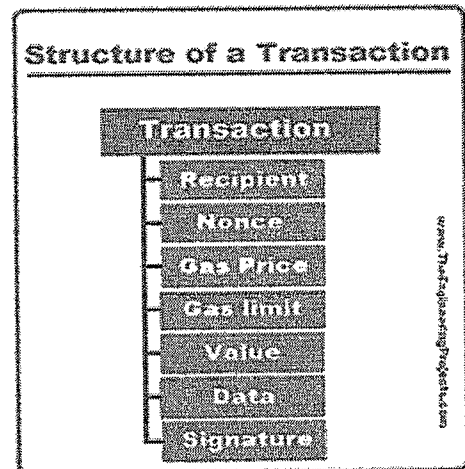


Fig: Structure of Transaction

Commands Used To Create Ethereum Transactions with Geth

To install .sh mode (Scripts) (in powershell [.ps] mode)

1. Install Git Bash (Recommended for Running .sh Scripts):

```
winget install Git.Git
```

2. Checking Installation:

```
git --version
```

3. Run .sh scripts using Git Bash:

```
bash script.sh
```

To install .js mode (JavaScript) (in powershell [.ps] mode)

1. Install Geth:

```
winget install Ethereum.Geth
```

2. Run Geth in PowerShell (Administrator Mode):

```
geth --http --http.api eth, net, web3, personal, admin, miner
```

3. Open Geth JavaScript Console:

```
geth attach http://127.0.0.1:8545
```

To install .js mode (JavaScript)

1. Start Geth and Attach Console (in .sh mode):

```
geth attach http://127.0.0.1:8545
```

2. Check Available Wallets (in .js mode):

```
eth.accounts
```

3. Check Wallet Balance (in .js mode)

```
web3.fromWei(eth.getBalance("your_wallet_address"), "ether")
```

4. Unlock the Sender Wallet (in .js mode):

```
personal.unlockAccount("sender_wallet", "your_password", 300)
```

5. Create and Send a Transaction (in .js mode):

```
eth.sendTransaction({from:"sender_wallet",to:"receiver_wallet",  
value: web3.toWei(0.1, "ether")})
```

6. Check Transaction Status (in .js mode):

```
eth.pendingTransactions
```

```
eth.getTransactionReceipt("transaction_hash")
```

7. Check Updated Balance (in .js mode):

```
web3.fromWei(eth.getBalance("receiver_wallet"), "ether")
```

Applications of Geth

1. **Decentralized finance (DeFi):** This includes smart contract-powered loans, minting of stablecoins, and decentralized exchanges. Example: “MakerDAO”.
2. **Digital identity:** Ethereum enables the verification of data in an open and transparent way, which means that it could also be used to pioneer the creation of a digital identification system used in government services (e.g., Aadhar-based e-sign in India, Adobe Sign).
3. **Tokenizing real-world assets:** Security tokens are a blockchain-based representation of real-world assets like stocks, precious metals, real estate, and more.
4. **Blockchain & Cryptocurrencies:** Digital signatures are used in Bitcoin, Ethereum, and other cryptocurrencies to verify transactions
5. **Health applications:** All hospitals around the world can store, access, and share their patient’s records.

Benefits of Geth

1. **Decentralisation:** No single entity or central authority controls the platform
2. **Transparency and security:** All transactions and Smart Contracts executed on Ethereum are recorded on a public ledger.
3. **Flexibility and customisation:** It allows developers to create various decentralised applications and tokens.
4. **Interoperability and standards:** These standards have become widely accepted, facilitating the creation and exchange of tickets across different DApps and platforms.
5. **Efficiency:** Reduces paperwork and speeds up processing.

Limitations of Geth

1. **Scalability issues:** Blockchain's current capacity is limited, due to high congestion.
2. **Energy consumption:** PoW needs miners to solve complicated mathematical puzzles to validate transactions.
3. **Regulatory challenges:** They face increasing regulatory scrutiny from governments and financial authorities worldwide.
4. **Complexity of development:** Development on Ethereum can be complex for newcomers.

CONCLUSION

In conclusion, working with the Go Ethereum (Geth) blockchain platform offers valuable hands-on in smart contract development, decentralized applications (dApps), and blockchain fundamentals. By exploring key Ethereum components such as clients, transactions, and wallets, learners gain a deeper understanding of the core principles behind blockchain technology.

Engaging in practical activities like deploying contracts, interacting with dApps, and utilizing development frameworks allows users to build essential skills in decentralized systems. This experience not only enhances technical knowledge but also provides real-world insights into the potential and challenges of blockchain applications, making Geth a crucial tool for anyone interested in blockchain development.



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CONTENT BEYOND SYLLABUS

Academic Year	2024-2025(EVEN)		
Name of the Faculty	SHASHIKALA H.C.		
Course Name /Code	BCM602		
Semester/Section	6th		
Activity Name	Simulation of Personal area network (PAN) and home area network(HAN).		
Topic Covered	HAN and PAN using LAN and IOT usage in the network.		
Date	16-5-2025		
No. of Participants	59		
Objectives/Goals	<ul style="list-style-type: none"> • Each students can create a network using a switches, Routers, PCs, Laptops, servers, links and etc., in CISCO Packet Tracer. • Students can understand the, how LAN and IOT working in home area network • Individually they can study simulation in CISCO Packet Tracer. 		
ICT Used	CISCO Packet Tracer with PC/LAPTOP		
Appropriate Method/Instructional materials/Exam Questions			
<ul style="list-style-type: none"> • Assigned different topic to different students • Students were given a demo on their respective topics 			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 5px;"> PO1: Science and engineering Knowledge PO2: Problem Analysis PO3: Design & Development PO4:Investigations of Complex Problems PO5: Modern Tool Usage PO6: Engineer & Society </td> <td style="width:50%; padding: 5px;"> PO7:Environment and Sustainability PO8:Ethics PO9:Individual & Team Work PO10: Communication PO11:Project Management & Finance PO12:Life long Learning </td> </tr> </table>		PO1: Science and engineering Knowledge PO2: Problem Analysis PO3: Design & Development PO4: Investigations of Complex Problems PO5: Modern Tool Usage PO6: Engineer & Society	PO7: Environment and Sustainability PO8: Ethics PO9: Individual & Team Work PO10: Communication PO11: Project Management & Finance PO12: Life long Learning
PO1: Science and engineering Knowledge PO2: Problem Analysis PO3: Design & Development PO4: Investigations of Complex Problems PO5: Modern Tool Usage PO6: Engineer & Society	PO7: Environment and Sustainability PO8: Ethics PO9: Individual & Team Work PO10: Communication PO11: Project Management & Finance PO12: Life long Learning		
Mapped CO's: CO1, CO3 Relevant PO's: 1,2,3,4,5,9,10,11,12	CO1: Understand the working of various routing protocols of Network layer CO3: Explain the services of Application layer protocols PO: PO1-Science and Engineering knowledge PO2-Problem Analysis PO3-Design & Development PO4-Investigation of complex problem solving PO5: Modern Tool Usage PO9-Individual &Team Work PO10-Communication PO12-Lifelong learning		
Significance of Results/Outcomes	<ul style="list-style-type: none"> • Students can understand the how data Communication working in real time. • They can understand the usage of IOT in real time. Application. 		
Reflective Critique	This pedagogy encouraged the students to gain knowledge about Protocols and its working in Data communication		

The report consists of

1. Cover page
2. Bonafide certificate
3. Content
4. Abstract
5. Introduction
6. The details of the PAN, HAN and IOT usage
7. Inferences and results
8. Conclusion
9. References

Sl. No	USN	Students Name	Marks(10)
1	1KS22CM001	ADITHYA ARUN SATHVIK	10
2	1KS22CM002	ANITHA P C	10
3	1KS22CM003	ANUSH S	5
4	1KS22CM005	ARSHIYA J	10
5	1KS22CM006	ARUN L JADAVA LAMANI	5
6	1KS22CM007	B S AISHWARYA	10
7	1KS22CM008	B S BRUNDHA	10
8	1KS22CM010	BASAVARAJ PATIL	4
9	1KS22CM011	BRINDA S	10
10	1KS22CM012	DEEKSHA H R	10
11	1KS22CM013	DEEKSHA S	10
12	1KS22CM014	DEEPIKA G	10
13	1KS22CM015	DINESH SHARMA B	10
14	1KS22CM016	DISHA A	10
15	1KS22CM017	GANGOTHRI P	10
16	1KS22CM018	H R CHANDANA	10
17	1KS22CM019	HAJIRA ANWAR	10
18	1KS22CM020	HAMEED VAJIR TERDALE	5
19	1KS22CM021	HEMANTH B R	10
20	1KS22CM022	HEMANTH K E	5

21	1KS22CM023	K R SHREYA	10
22	1KS22CM024	KARTHIK R JOSHI	5
23	1KS22CM025	KIRAN D	5
24	1KS22CM026	KUNDANKUMAR S	10
25	1KS22CM028	MANJUNATH K	5
26	1KS22CM030	MOHAMMED FAHIM R	10
27	1KS22CM031	NARASIMHA M K	10
28	1KS22CM032	NEELANJALI C	10
29	1KS22CM033	NIMISHA S L	10
30	1KS22CM034	NISHAL R	4
31	1KS22CM035	NITHIYA V	5
32	1KS22CM036	PAVAN R	4
33	1KS22CM037	PAVAN UMESH KULKARNI	10
34	1KS22CM038	PRAJWAL M P	10
35	1KS22CM039	PRUTHVIRAJ N	5
36	1KS22CM040	PUNITH K M	4
37	1KS22CM041	RAKSHITH M	5
38	1KS22CM042	SAI SMRITI M	10
39	1KS22CM043	SAKSHI SINGH	10
40	1KS22CM044	SATHVIK R P	5
41	1KS22CM045	SHREEDHANYA M S	10
42	1KS22CM046	SHREEPADA C	5
43	1KS22CM047	SHREYAS P	10
44	1KS22CM048	SHRIKUMAR	4
45	1KS22CM049	SNEHA B KORADAKERI	5
46	1KS22CM050	SREYASREE R JOSHI	5
47	1KS22CM051	SRILAKSHMI P Y	5
48	1KS22CM052	SRINIVASA R	10

49	1KS22CM053	SUHAS PRABHAKAR CHINDI	4
50	1KS22CM054	SUJAN S P	4
51	1KS22CM055	SUJITH MANNE	4
52	1KS22CM057	UMME HANI	10
53	1KS22CM058	Y ISHITHA	10
54	1KS22CM059	YERABOTHULA CHAITANYA	5
55	1KS22CM060	YERRABOTHULA KIRAN	5
56	1KS23CM400	CHANDRASHEKHARA SWAMY	4
57	1KS23CM401	CHETAN S KORADAKERI	5
58	1KS23CM402	PRANATHI SAI M	10
59	1KS23CM403	RAKESH KUMAR R	5

Sheela H-C

Signature of Course In charge

[Handwritten Signature]

Signature of HOD

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CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	D SARITHA
Course Name /Code	Machine Learning(BCM601)
Semester/Section	VI/ A
Activity Name	PPT Presentation and Report
Topic Covered	Machine Learning(BCM601)
No. of Participants	59
Objectives/Goals	To understand different ML algorithms to improving their knowledge.
ICT Used	PPT
Relevant PO's	PO8, PO9, P10, PO11, PO12
Significance of Results/Outcomes	Students were able to Understand ML Algorithms.

Proofs attached:

What is Federated Learning?

Distributed Machine Learning

Federated learning is a type of distributed machine learning where model training occurs across multiple decentralized devices or servers.

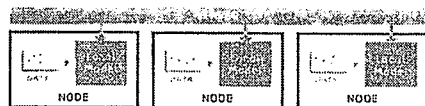
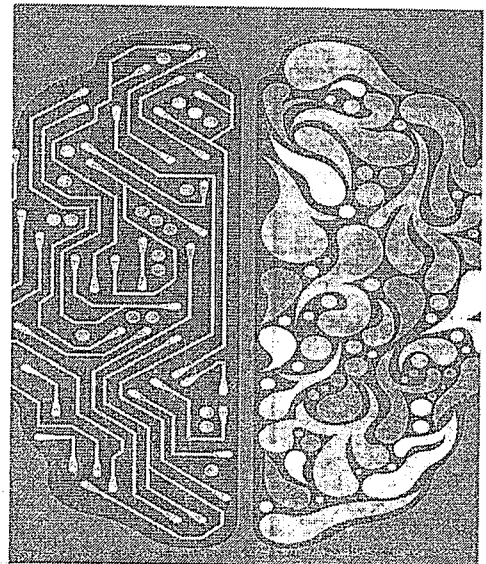
Raw Data Stays Local

A key feature of federated learning is that raw data remains on local devices. Only model updates or parameters are shared with a central server.

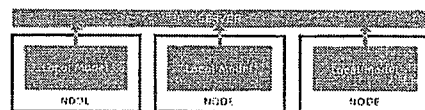
Privacy-Preserving

This approach enables collaborative learning without compromising data privacy, making it suitable for sensitive applications and industries.

Federated learning is a privacy-preserving collaborative learning technique that keeps raw data local, only sharing model updates. It is a key innovation.



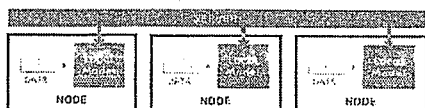
1. Nodes receive model from server and start training.



2. Nodes send partially trained models to server.







3. The server combines those models to make a federated model.



4. The federated model is sent to the nodes. Repeat as necessary.

Core Mechanisms of Federated Learning

-  **Central Coordination**
A central server coordinates the model training process.
-  **Local Training**
Local devices train the model on their own data.
-  **Parameter Aggregation**
The server aggregates model parameters, not raw data.
-  **Privacy Preservation**
Secure model averaging and differential privacy techniques.

Federated learning's core mechanisms are central server coordination, local training, parameter aggregation, and privacy preservation techniques, which collectively reduce data transmission and privacy risks.

Real-World Applications



Healthcare

Collaborative disease prediction models, medical data sharing.



Mobile Devices

Personalized recommendations, improved user experience.



Financial Services

Fraud detection, risk assessment.



Smart Cities

Distributed IoT learning, traffic management, resource optimization.

Federated learning is being applied across diverse fields, from healthcare and mobile devices to financial services and smart cities. It offers significant potential for collaborative disease prediction, personalized recommendations, fraud detection, and distributed IoT learning.



The Future of Collaborative Machine Learning

Democratizing AI

Enabling wider participation in AI development.

1

2

Global Knowledge Sharing

Facilitating collaboration and data exchange.

Industry Transformation

Impacting healthcare, finance, and smart cities.

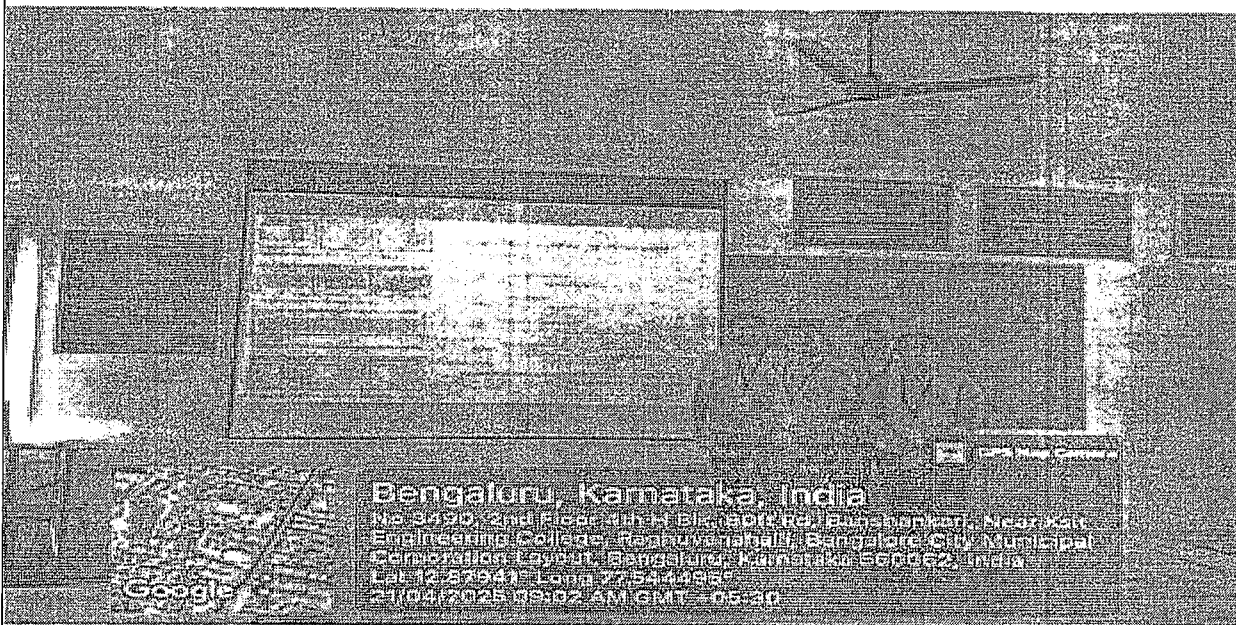
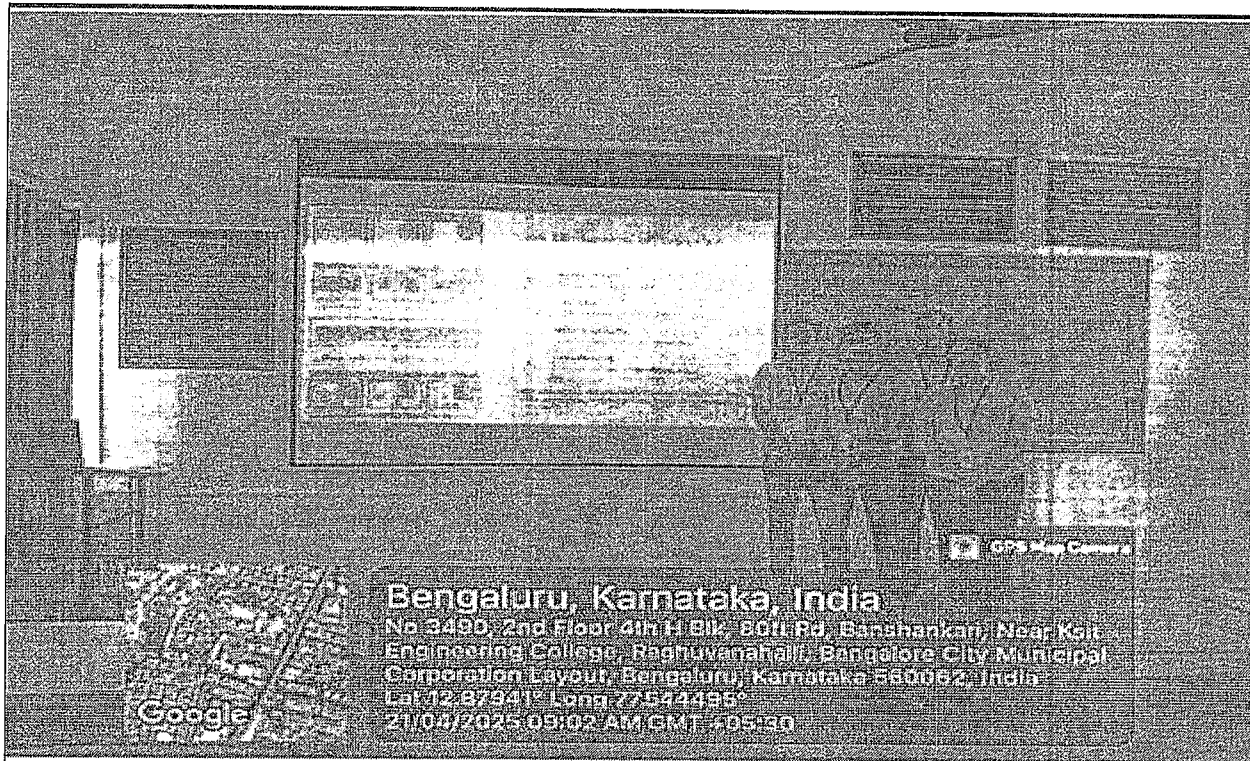
4

3

Data Sovereignty

Maintaining individual control over data.

Federated learning is democratizing AI model development by enabling global knowledge sharing while maintaining individual data sovereignty. Predicted to transform multiple industries, it is emerging as a next-generation collaborative intelligence paradigm.



Signature of the Course In-charge

Signature of HOD

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Content beyond Syllabus

Academic Year	2023-24 (EVEN)
Name of the Faculty	Dr. CHANDA V. REDDY
Course Name/Code	DISCRETE MATHEMATICAL STRUCTURES / BCS405A
Semester/Section	IV
Activity Name	QUIZ
Topic Covered	DISCRETE MATHEMATICAL STRUCTURES (All Modules)
Date	31/07/2024
No. of Participants	59
Objectives/Goals	<ul style="list-style-type: none">• To improve Engineering knowledge in Research and IPR• To improve the self-learning skills of students• To face GATE and placement
ICT Used	Offline
Appropriate Method/Instructional materials/Exam Questions <ul style="list-style-type: none">• Prior information was given to students• Students are asked to answer the quiz and only one response was given	
Relevant PO'S	PO1, PO2, PO4, PO6, PO8, PO9, PO10, PO12
POs Covered	PO 9, PO10
Significance of outcomes	Students able to Improve their knowledge in DISCRETE MATHEMATICAL STRUCTURES
Reflective Critique	The activity improved the learning, Engineering knowledge in DISCRETE MATHEMATICAL STRUCTURES
Proof	Hard copy

Signature of Course In charge

Signature of HOD

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Bengaluru - 560 109.

Sl.No	USN	Student Name
1	1KS22CM001	ADITHYA ARUN SATHVIK
2	1KS22CM002	ANITHA P C
3	1KS22CM003	ANUSH S
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7	1KS22CM008	B S BRUNDHA
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34	1KS22CM038	PRAJWAL M P
35	1KS22CM039	PRUTHVIRAJ N
36	1KS22CM040	PUNITH K M
37	1KS22CM041	RAKSHITH M
38	1KS22CM042	SAI SMRITI M
39	1KS22CM043	SAKSHI SINGH
40	1KS22CM044	SATHVIK R P
41	1KS22CM045	SHREEDHANYA M S
42	1KS22CM046	SHREEPADA C
43	1KS22CM047	SHREYAS P
44	1KS22CM048	SHRIKUMAR
45	1KS22CM049	SNEHA B KORADAKERI
46	1KS22CM050	SREYASREE R JOSHI
47	1KS22CM051	SRILAKSHMI P Y
48	1KS22CM052	SRINIVASA R
49	1KS22CM053	SUHAS PRABHAKAR CHINDI
50	1KS22CM054	SUJAN S P
51	1KS22CM055	SUJITH MANNE
52	1KS22CM057	UMME HANI
53	1KS22CM058	Y ISHITHA
54	1KS22CM059	YERABOTHULA CHAITANYA
55	1KS22CM060	YERRABOTHULA KIRAN
56	1KS23CM400	CHANDRASHEKHARA SWAMY
57	1KS23CM401	CHETAN S KORADAKERI
58	1KS23CM402	PRANATHI SAI M
59	1KS23CM403	RAKESH KUMAR R



Signature of Course In charge



Signature of HOD

Head of the Department
Dept. of Computers and Communication
K. S. Institute of Technology
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K. S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
DEPARTMENT OF COMPUTER & COMMUNICATION ENGINEERING

Content beyond Syllabus

Academic Year	2023-2024-(EVEN)
Name of the Faculty	SHASHIKALA H.C.
Course Name/Code	DESIGN AND ANALYSIS OF AN ALGORITM / BCS401
Semester/Section	IV
Activity Name	QUIZ
Topic Covered	DESIGN AND ANALYSIS OF AN ALGORITM (All Modules)
Date	31/07/2024
No. of Participants	59
Objectives/Goals	<ul style="list-style-type: none">• To improve Engineering knowledge in DAA• To improve the self-learning skills of students• To face GATE and placement
ICT Used	Google form
Appropriate Method/Instructional materials/Exam Questions <ul style="list-style-type: none">• Prior information was given to students• Students are asked to answer the quiz and only one response was given	
Relevant PO'S	PO1, PO2, PO4, PO6, PO8, PO10, PO12
Significance of outcomes	Students able to Improve their knowledge in DESIGN AND ANALYSIS OF AN ALGORITM
Reflective Critique	The activity improved the learning, Engineering knowledge in DESIGN AND ANALYSIS OF AN ALGORITM
Proof	Google form

Shashikala H.C.

Signature of Course In charge

[Signature]

Signature of HOD

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Dept. of Computers and Communication Engg.
K. S. Institute of Technology
Bengaluru - 560 109.



K. S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
DEPARTMENT OF COMPUTER & COMMUNICATION ENGINEERING

Branch : DEPARTMENT OF COMPUTER & COMMUNICATION
ENGINEERING
Course Name : DESIGN AND ANALYSIS OF AN ALGORITHM / **Course Code** : BCS401
Semester/Section : IV

Content Beyond Syllabus

Activity type : Quiz **Marks** : 15
Objective : 1. To improve the learning, Engineering knowledge in DAA
2. To improve the self-learning skills of students
3. To face GATE and placement
POs Covered : PO 9, PO10

Sl.No	USN	Student Name	Marks-15
1	1KS22CM001	ADITHYA ARUN SATHVIK	12
2	1KS22CM002	ANITHA P C	15
3	1KS22CM003	ANUSH S	13
4	1KS22CM005	ARSHIYA J	15
5	1KS22CM006	ARUN L JADAVA LAMANI	13
6	1KS22CM007	B S AISHWARYA	15
7	1KS22CM008	B S BRUNDHA	13
8	1KS22CM010	BASAVARAJ PATIL	10
9	1KS22CM011	BRINDA S	15
10	1KS22CM012	DEEKSHA H R	9
11	1KS22CM013	DEEKSHA S	14
12	1KS22CM014	DEEPIKA G	11
13	1KS22CM015	DINESH SHARMA B	14
14	1KS22CM016	DISHA A	15
15	1KS22CM017	GANGOTHRI P	14
16	1KS22CM018	H R CHANDANA	12
17	1KS22CM019	HARIJA ANWAR	14
18	1KS22CM020	HAMEED VAJIR TERDALE	10
19	1KS22CM021	HEMANTH B R	7
20	1KS22CM022	HEMANTH K E	11
21	1KS22CM023	K R SHREYA	11
22	1KS22CM024	KARTHIK R JOSHI	5
23	1KS22CM025	KIRAN D	14
24	1KS22CM026	KUNDANKUMAR S	12
25	1KS22CM028	MANJUNATH K	15
26	1KS22CM030	MOHAMMED FAHIM R	13
27	1KS22CM031	NARASIMHA M K	15
28	1KS22CM032	NEELANJALI C	15
29	1KS22CM033	NIMISHA S L	12
30	1KS22CM034	NISHAL R	8
31	1KS22CM035	NITHYA V	8

32	1KS22CM036	PAVAN R	9
33	1KS22CM037	PAVAN UMESH KULKARNI	12
34	1KS22CM038	PRAJWAL M P	10
35	1KS22CM039	PRUTHVIRAJ N	10
36	1KS22CM040	PUNITH K M	14
37	1KS22CM041	RAKSHITH M	13
38	1KS22CM042	SAI SMRITI M	11
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41	1KS22CM045	SHREEDHANYA M S	15
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57	1KS23CM401	CHETAN S KORADAKERI	8
58	1KS23CM402	PRANATHI SAI M	9
59	1KS23CM403	RAKESH KUMAR R	13

Signature of Course In charge

Signature of HOD

- c).Frequencies 3 2 3 distributions 4 1 6
 d).Frequencies 2 1 3 distributions 3 2 6

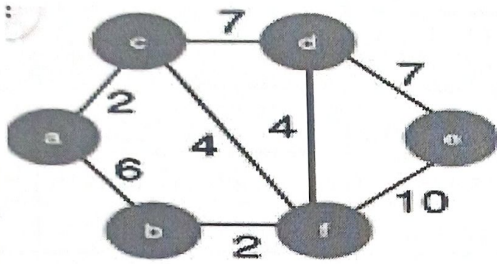
Module-4

- 10 Which of the following methods can be used to solve the Knapsack problem?
 a) Brute force algorithm b) Recursion
 c) Dynamic programming d) Brute force, Recursion and Dynamic Programming

CO4 1

- 11 Consider the given graph. What is the weight of the minimum spanning tree using the Kruskal's algorithm?

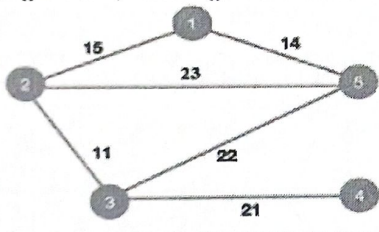
CO4 1



- a). 24 b) 23 c). 19 d) 14

- 12 Which of the following edges form the MST of the given graph using Prim's algorithm, starting from vertex 4.

CO4 1

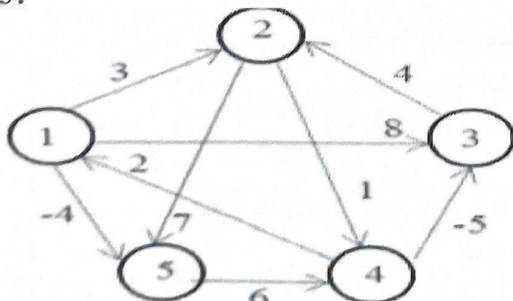


- a) (4-3)(5-3)(2-3)(1-2) b) (4-3)(3-5)(5-1)(1-2)
 c) (4-3)(3-5)(5-2)(1-5) d) (4-3)(3-2)(2-1)(1-5)

Module-5

- 13 In the given graph, what is the minimum cost to travel from vertex 1 to vertex 3?

CO5 1



- a). -3 b). 10 c). 2 d). 3

14	<p>Given an array of non-negative integers, and a value <i>sum</i>, determine if there is a subset of the given set with sum equal to given <i>sum</i>.</p> <p>Input: N = 6 arr[] = {3, 34, 4, 12, 5, 2} sum = 30 how many subset for the sum 30?</p> <p>a) 1 b) 0 c) 2 d) 3</p>	CO5	1
15	<p>Of the following given options, which one of the following is a correct option that provides an optimal solution for 4-queens problem?</p> <p>a). (3,1,4,2) b) (2,3,1,4) c) (4,3,2,1) d) (4,2,3,1)</p>	CO5	1

COURSE OUTCOMES:

- CO 1. To **Analyze** and **evaluate** the algorithms and their performance using different Methods..
- CO 2. To **demonstrate** the efficiency of algorithms using asymptotic notations..
- CO 3. To **solve** problems using various algorithm design methods, including brute force, greedy, divide and conquer, decrease and conquer, transform and conquer, dynamic Programming, backtracking, and branch and bound.
- CO4. To **solve** problems using various algorithm dynamic programming, backtracking, and branch and bound.
- CO 5. To **Discuss** the concepts of P and NP complexity classes.

<p>PO1: Science and engineering Knowledge PO2: Problem Analysis PO3: Design & Development PO4: Investigations of Complex Problems PO5: Modern Tool Usage PO6: Engineer & Society</p>	<p>PO7:Environment and Sustainability PO8:Ethics PO9:Individual & Team Work PO10: Communication PO11:Project Management & Finance PO12:Lifelong Learning</p>
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<p>Mapped CO's:CO1 Relevant PO's:PO1–PO4,PO9,PO10</p>	<p>CO1: Apply asymptotic notational method to analyze the performance of the algorithms in terms of time complexity. PO:PO1-Science and Engineering knowledge PO2-Problem Analysis PO3-Design & Development PO4-Investigation of complex problem solving PO9-Individual &Team Work PO10-Communication PO12-Lifelong learning</p>
<p>Mapped CO's: CO2 Relevant PO's:PO1-PO4,PO8,PO9,PO10,PO12</p>	<p>CO2: Utilize divide & conquer approaches and decrease & conquer approaches to solve computational problems. PO:PO1-Science and Engineering knowledge PO2-Problem Analysis PO3-Design & Development PO4-Investigation of complex problem solving PO8-Ethics</p>

	<p>PO9-Individual & Team Work PO10-Communication PO12-Lifelong learning</p>
<p>Mapped CO's: CO3 Relevant PO's: PO1-PO4,PO8,PO9,PO10,PO12</p>	<p>CO3: Make use of transform & conquer and dynamic programming design approaches to solve the given real world or complex computational problems PO:PO1-Science and Engineering knowledge PO2-Problem Analysis PO3-Design & Development PO4-Investigation of complex problem solving PO8-Ethics PO9-Individual & Team Work PO10-Communication PO12-Lifelong learning</p>
<p>Mapped CO's: CO4 Relevant PO's: PO1-PO4,PO8,PO9,PO10,PO12</p>	<p>CCO4: Apply greedy and input enhancement methods to solve graph & string based computational problems. PO:PO1-Science and Engineering knowledge PO2-Problem Analysis PO3-Design & Development PO4-Investigation of complex problem solving PO8-Ethics PO9-Individual & Team Work PO10-Communication PO12-Lifelong learning</p>
<p>Mapped CO's: CO5 Relevant PO's: PO1-PO4,PO8,PO9,PO10,PO12</p>	<p>CO5: Make use of various classes (P,NP and NP Complete) of problems And demonstrate backtracking, branch & bound and approximation methods PO:PO1-Science and Engineering knowledge PO2-Problem Analysis PO3-Design & Development PO4-Investigation of complex problem solving PO8-Ethics PO9-Individual & Team Work PO10-Communication PO12-Lifelong learning</p>

Students are writing the test



Aravind H. C.
Signature of Course In charge

[Signature]
Signature of HOD

Head of the Department
Dept. of Computers and Communication Engg.
K. S. Institute of Technology
Bengaluru - 560 109.



CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	T.NAGA JYOTHI
Course Name /Code	UNIVERSAL HUMAN VALUES-II / BHUK408
Semester/Section	IV / A
Activity Name	Assignments and Posters
Topic Covered	<ul style="list-style-type: none">• The essential complementarity between 'VALUES' and 'SKILLS' to ensure sustained happiness and prosperity which are the core aspirations of all human beings.• A Holistic perspective towards life and profession as well as towards happiness and prosperity based on a correct understanding of the Human reality and the rest of existence.• The basis of Universal Human Values and movement towards value-based living in a natural way.• Holistic understanding in terms of ethical human conduct, trustful and mutually fulfilling human behaviour and mutually enriching interaction with Nature.• Orientation input in value education to the young enquiring minds.
No. of Participants	63
Objectives/Goals	<ul style="list-style-type: none">• They would become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind.• They would have better critical ability.• They would also become sensitive to their commitment towards what they have understood (human values, human relationship and human society).• It is hoped that they would be able to apply what they have learnt to their own self in different day-to-day settings in real life, at least a beginning would be made in this direction.
Appropriate Method/Instructional materials/Exam Questions Assignments	
Relevant CO's	CO1,CO2,CO3,CO4,CO5
Relevant PO's	PO6,PO7,PO8,PO9,PO10
Significance of Results/Outcomes	Students were be able to gain the knowledge related to Value Education, Harmony in the Human Being, Family and Society, Nature/Existence, and Holistic Understanding – a Look at Professional Ethics.
Reflective Critique	Expected to positively impact common graduate attributes like:

- Ethical human conduct
- Socially responsible behaviour
- Holistic vision of life
- Environmentally responsible work
- Having Competence and Capabilities for Maintaining Health and Hygiene
- Appreciation and aspiration for excellence (merit) and gratitude for all.

Sample Documents

Proposed - 01

Q1) Write a paragraph by Atleast 50 words on the topic "The Value of Education".

Education is the process of acquiring knowledge, skills, and values. It is a continuous process that starts from childhood and continues throughout life. Education is essential for personal and social development. It helps in building a better future for oneself and the society.

Q2) Write an affidavit on the property and assets of a person.

I, the undersigned, do hereby declare that I am the owner of the property and assets mentioned below. I have no other property or assets. I have no pending legal cases or disputes regarding the property or assets mentioned above.

Q3) Write an affidavit on the health and financial status of a person.

I, the undersigned, do hereby declare that I am in good health and financial status. I have no chronic diseases or disabilities. I have no pending legal cases or disputes regarding my health or financial status.

Q4) Write an affidavit on the marital status of a person.

I, the undersigned, do hereby declare that I am single. I have never been married. I have no pending legal cases or disputes regarding my marital status.

Q5) Write an affidavit on the death of a person.

I, the undersigned, do hereby declare that I am the legal heir of the deceased person. I have no other legal heirs. I have no pending legal cases or disputes regarding the death of the deceased person.

Q1) Write a paragraph on the topic "The Value of Education".

Education is the process of acquiring knowledge, skills, and values. It is a continuous process that starts from childhood and continues throughout life. Education is essential for personal and social development. It helps in building a better future for oneself and the society.

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Proposed - 02

Q1) Write a paragraph on the topic "The Value of Education".

Education is the process of acquiring knowledge, skills, and values. It is a continuous process that starts from childhood and continues throughout life. Education is essential for personal and social development. It helps in building a better future for oneself and the society.

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EMPEROR ASHOKA

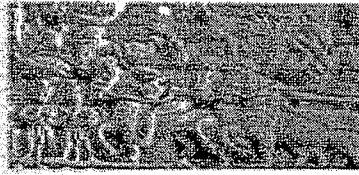


EMPEROR ASHOKA : THE GREAT EMPEROR OF INDIA

Emperor Ashoka, also known as Ashoka the Great, was a legendary Indian emperor who ruled from 269 to 232 BCE. He was the third ruler of the Mauryan dynasty and is considered one of the greatest emperors in Indian history.

EARLY LIFE AND REIGN

Emperor Ashoka was born in 304 BCE in Pataliputra, India, to King Bindusara and Queen Chandra. He was the grandson of Chandragupta Maurya, the founder of the Mauryan Empire. Ashoka ascended to the throne in 269 BCE after the death of his father, King Bindusara. He faced opposition from his brothers and other claimants to the throne, but eventually established himself as the ruler.



KALINGA WAR:

The Kalinga War (261-263 BCE) was a brutal conflict between the Mauryan Empire, led by Emperor Ashoka, and the kingdom of Kalinga (modern-day Odisha, India), resulting in massive bloodshed and Ashoka's subsequent conversion to Buddhism.

EDICTS OF ASHOKA

The Edicts of Ashoka (269-231 BCE) are 33 inscriptions on rocks and pillars, outlining Ashoka's policies and Buddhist principles. They promote non-violence, tolerance, and compassion, and mark the spread of Buddhism throughout India and beyond, providing valuable insights into ancient Indian history and culture.



ASHOKA'S LEGACY:

Ashoka's legacy includes spreading Buddhism, non-violence, and tolerance through his edicts and monuments like the Ashoka Pillars and Sanchi Stupa. His lion capital is now India's national emblem, symbolizing power and courage.

Under the guidance of : Prof. NAGA JYOTHI Y
KALITHINA SRINIVASMOINI
PANDHA GIKSICACDES
SARVATU SIVA VIKRANTANATH

Signature of the Course In-charge

Signature of HOD

Head of the Department
Dept. of Computers and Communication Engg.
K. S. Institute of Technology
Bengaluru - 560 109.



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DEPARTMENT OF COMPUTER AND COMMUNICATION
ENGINEERING

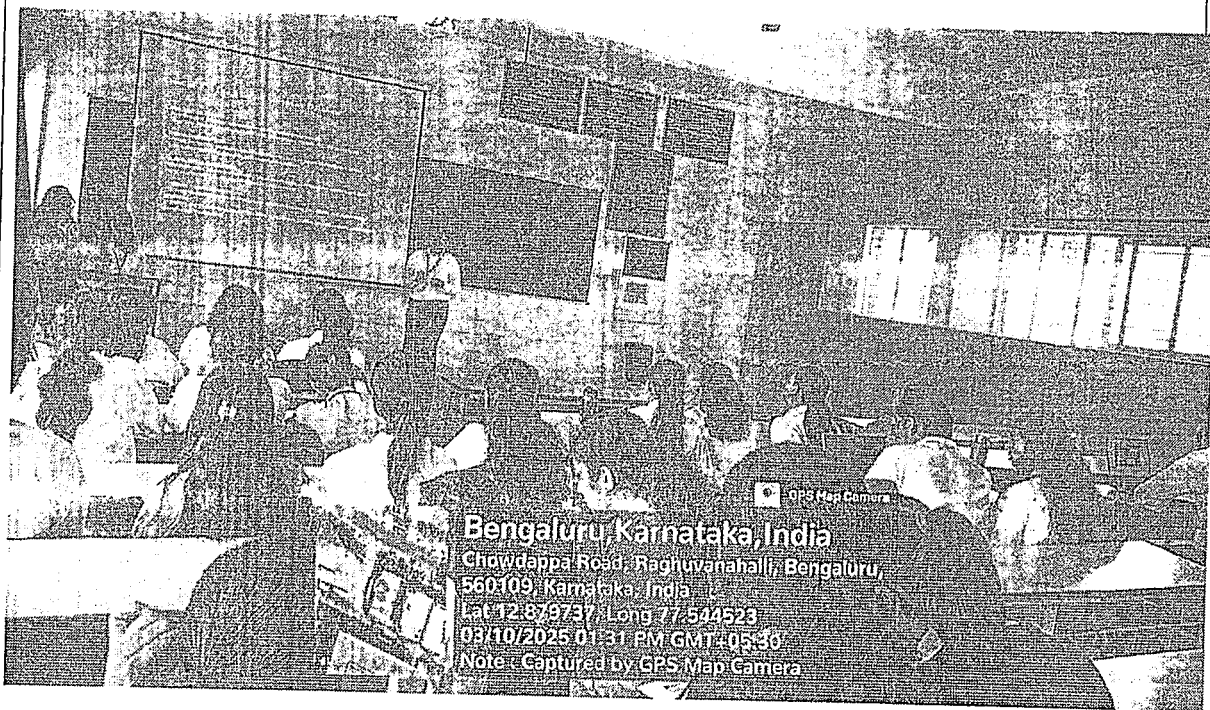
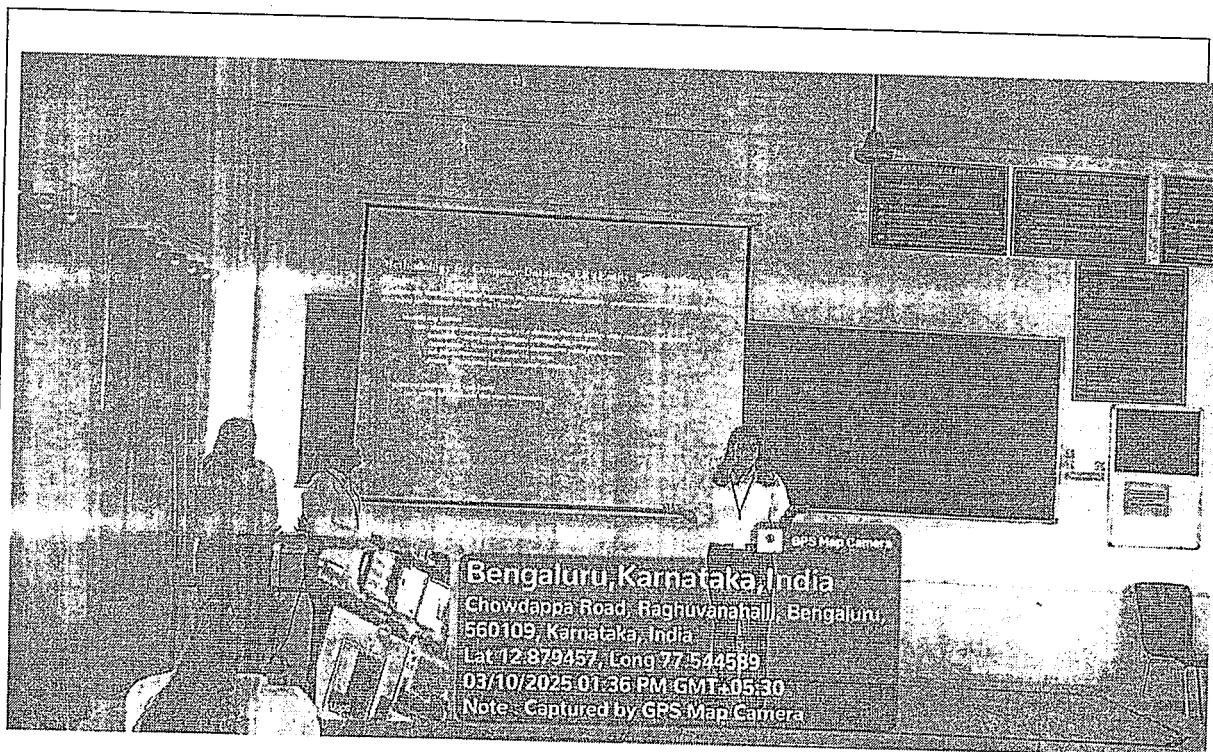
TEACHING AND LEARNING

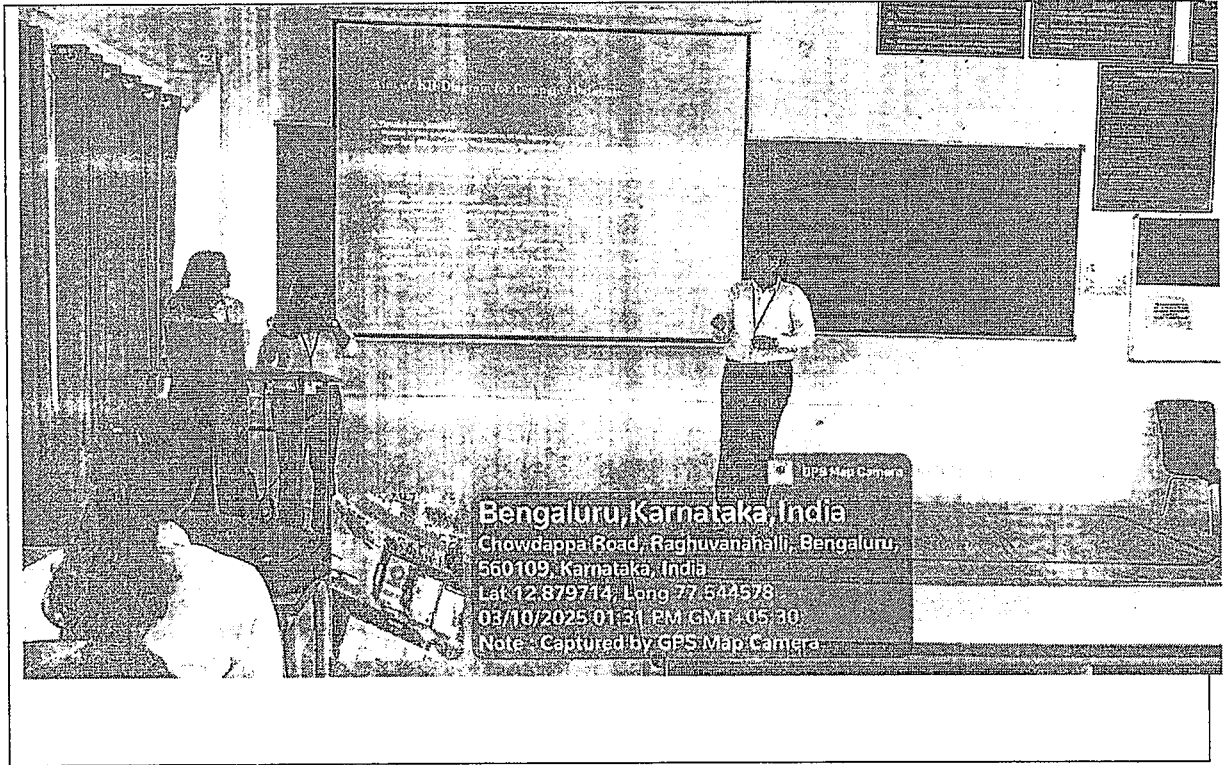
CONTENT BEYOND SYLLABUS-2024-2025

4th SEMESTER:

Academic year	2024-2025
Name of the Faculty	T NAGA JYOTHI
Course Name/Course Code	DATABASE MANAGEMENT SYSTEM BCS403
Semester	IV
Activity Name	CASE STUDY 1) Company 2) Airline 3) Movie 4) Voting System 5) Library Management System
Topic Covered	Modules
Date	10/3/25&11/3/25
No of Participants	63
Objectives/Goals	VISUAL REPRESENTATION OF ABOVE CASE STUDIES
ICT used	LAPTOP
Appropriate Method /Instructional Materials/Exam Questions	
<ul style="list-style-type: none"> • Assigned all topics to students • Students were asked to give presentation from the given topics • Constructing a E-R Diagram for different scenarios 	
Relevant PO's	PO1, PO2, PO3, PO4, PO9, PO10, PO12
Significance of Results/Outcomes	Students understood the Notations used in E-R Model and Construction of E-R Diagram Students were divided in to teams
Mapped CO's	CO2: E-R diagram Notations Constructing E-R Diagram

Proofs :(Significant Photos Attached):





Signature of Course Incharge

Signature of HOD

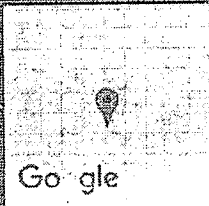
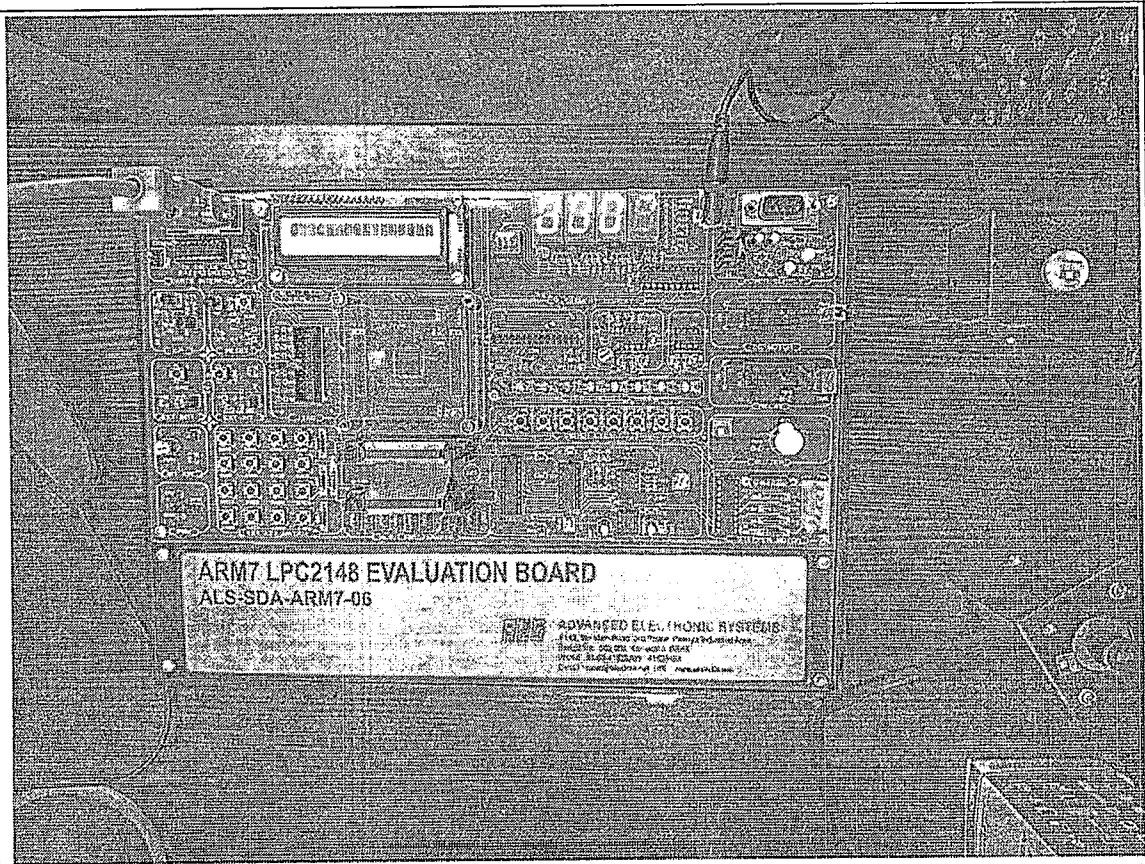
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DEPARTMENT OF COMPUTER AND COMMUNICATIONS ENGINEERING

TEACHING AND LEARNING
CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	Shilpa M.
Course Name /Code	Microcontrollers/BCS402
Semester/Section	IV/ A
Activity Name	Demonstration of interfacing experiments using ARM Evaluation board.
Topic Covered	Programming of ARM microcontroller using an evaluation board.
No. of Participants	63
Objectives/Goals	To visualise and understand the programming of ARM microcontroller for control applications like Stepper motor control, relay control, DC motor control, Buzzer control, LCD Display, Seven segment display.
ICT Used	BB+LCD+Systems with Keil 4 Uvision
Hardware components used	ARM7 Evaluation board, Interfacing modules. RS232 cables.
Appropriate Method/Instructional materials/Exam Questions Demonstration conducted on the interfacing experiments and students worked hands-on with the kits..	
Relevant CO's	CO2, CO4
Relevant PO's	PO1,PO2, PO3, PO4,PO5, PO9, PO12
Significance of Results/Outcomes	Students were able to Demonstrate the dumping of the code onto the ARM7 Board and observe the controlling of various applications (Stepper motor control, relay control, DC motor control, Buzzer control, LCD Display, Seven segment display)
Reflective Critique	<ul style="list-style-type: none"> • Demonstration helped students to physically see the initial design phase of an embedded system. • Demonstration enabled students to identify the steps involved in programming a microcontroller and observing the output, Debugging the hardware bottlenecks like Serial communication failure, cable faults etc.
Proofs attached: Photos of the demonstration and hands - on.	

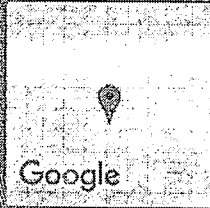


Bengaluru, Karnataka, India

2, Kanakapura Main Rd, Raghuvanahalli, Bangalore City
Municipal Corporation Layout, Bengaluru, Karnataka 560062,
India

Lat 12.880205° Long 77.544995°
21/04/25 10:30 AM GMT +05:30

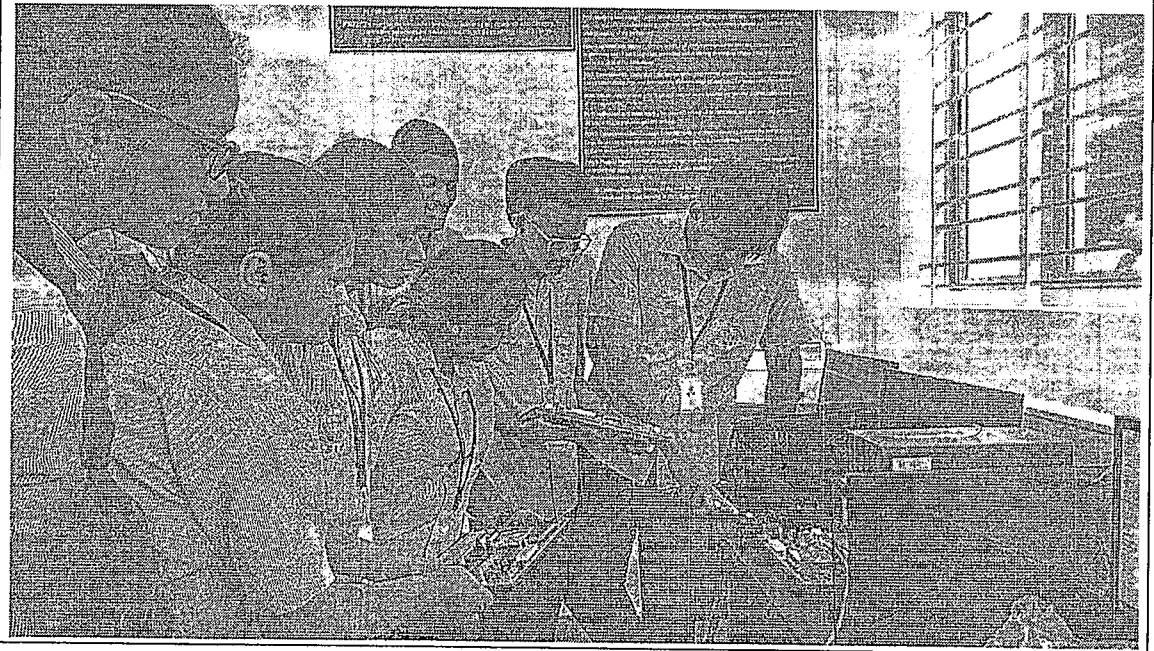
GPS Map Camera



Bengaluru, Karnataka, India

2, Kanakapura Main Rd, Raghuvanahalli, Bangalore City
Municipal Corporation Layout, Bengaluru, Karnataka 560062,
India

Lat 12.880205° Long 77.544995°
21/04/25 10:29 AM GMT +05:30



Shilpa . M

Signature of the Course In-charge


Signature of HOD

Head of the Department
Dept. of Computers and Communication Engg.
K. S. Institute of Technology
Bengaluru - 560 109.



Content Beyond Syllabus

Academic Year	2024-2025 (Even)
Name of the Faculty	Dr. Shobha G
Course Name/Code	Biology for Engineers / BBOC407
Semester/Section	IV/CCE
Activity Name	QUIZ
Topic Covered	Related to Biology and Application of Biology in engineers
Date	JUNE-2025
No. of Participants	63
Objectives/Goals	<u>Objectives</u> <ul style="list-style-type: none">• To improve Engineering knowledge in field of Biology• To improve the self-learning skills of students• To improve the confidence, communication level
ICT Used	GOOGLE FORM
Appropriate Method/Instructional materials/Exam Questions <ul style="list-style-type: none">• Prior information was given to students to select the topics and prepare for the same• Students are asked to answer the quiz and only one response was given	
Relevant PO'S	PO1, PO2, PO3, PO5, PO6, PO7, PO10
Significance of outcomes	Students able to Improve their knowledge in biology and its application.
Reflective Critique	The activity improved the learning, communication skills The activity provided a platform for students to work as team
Proof	GOOGLE FORM


Signature of Course In charge


Signature of HOD

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SIDE

- 1 Long strand DNA used in origami
- 2 Material used to heal/replace the injured part in bone
- 3 Short strand of DNA used in DNA origami
- 4 Extraction of ores from minerals using microorganism, process called
- 6 Bio imaging technique used to scan brain
- 7 Folding of DNA into 2D and 3D structure, process called
- 8 A protein head attaches to actin
- 10 Bioink used in 3D printing of skin
- 15 Water based bioprinting material used in 3D bioprinting

DOWN

- 5 Organism used in bioconcrete
- 9 Bioink used in 3D printing of bone
- 11 Bioink used in 3D printing of ear
- 12 Bioink used in 3D printing of food
- 13 Software used for modeling in 3D printing
- 14 Signs that uses arms and legs to walk



K. S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
DEPARTMENT OF COMPUTER & COMMUNICATION ENGINEERING

Branch : DEPARTMENT OF COMPUTER & COMMUNICATION ENGINEERING

Course Name : Biology for Engineers

Course Code : BBOC407

Semester/Section : IV-A

Academic year : 2024-2025

	USN No	Student Name	MARKS (5)
1	1KS23CM001	AKASH LAXMAN BAJANTRI	5
2	1KS23CM003	BHIMASHANKAR	5
3	1KS23CM004	BHOOMIKA. L. M	5
4	1KS23CM005	CHANDANA A ATHREYESA	5
5	1KS23CM006	CHETAN CHANNAVEER	5
6	1KS23CM007	YASHAS D	5
7	1KS23CM008	DEEPAK.R.PISE	5
8	1KS23CM009	DHANANJANEYA.S.S	5
9	1KS23CM010	DITENDRA SAI. G	5
10	1KS23CM011	HAMSA. S	5
11	1KS23CM012	HRISHIKESH.Y	5
12	1KS23CM013	JAGADESH	5
13	1KS23CM014	JNANESHWARI. D S	5
14	1KS23CM015	K R CHARAN	5
15	1KS23CM016	K SHRIDEVI B ADIGA	5
16	1KS23CM017	KHUSHI.K	5
17	1KS23CM018	KRUTHIKA S.R	5
18	1KS23CM019	LAVANYA GC	5
19	1KS23CM020	LAVANYA SHETTY	5
20	1KS23CM021	MAANY ARUN	5
21	1KS23CM022	MADHUMITHA S	5
22	1KS23CM023	MAHALAKSHMI N	5
23	1KS23CM024	MANASA G K	5
24	1KS23CM025	MANYA D	5
25	1KS23CM026	MOHAMMAD ATIYAB MANAWWAR	5
26	1KS23CM027	MOHAN KUMAR KS	5
27	1KS23CM028	MOUNISHA.H.K	5
28	1KS23CM029	MRINAL DESHPANDE	5

29	IKS23CM030	NAMRATHA BHARGAVA S	5
30	IKS23CM031	NIRANJAN P Y	5
31	IKS23CM032	NITHINKUMAR TS	5
32	IKS23CM033	PALLAVI.S	5
33	IKS23CM034	PRASHANTH. D. S	5
34	IKS23CM035	PREKSHA.G	5
35	IKS23CM036	PRIYANKA H RAJ	5
36	IKS23CM037	PRUTHVI DEVI.V	5
37	IKS23CM038	PRUTHVIK M	5
38	IKS23CM039	RAKSHA K	5
39	IKS23CM040	REETA GRACY	5
40	IKS23CM041	S R DARSHAN	5
41	IKS23CM042	SAGAR RAJASUBRAMANYA KOUSHIK	5
42	IKS23CM043	SHUBAN.S	5
43	IKS23CM044	SNEHA HALLIKERI	5
44	IKS23CM045	SUBHAM BANERJEE	5
45	IKS23CM046	SUJAN S	5
46	IKS23CM047	SUJITH S	5
47	IKS23CM048	SUKETH.S.M	5
48	IKS23CM049	SUNAAD S BHATT	5
49	IKS23CM050	SUPRIYA.M.J	5
50	IKS23CM051	SYED ISMAIL	5
51	IKS23CM052	TEJAS	5
52	IKS23CM053	TEJAS R C	5
53	IKS23CM054	THRISHA K S	5
54	IKS23CM055	VAISHNAVI S	5
55	IKS23CM056	VARSHA RANGANATHA	5
56	IKS23CM057	VATHSALA	5
57	IKS23CM058	VENKATESH B V	5
58	IKS23CM059	VIKAS.M	5
59	IKS23CM060	VISHNU PRIYA GS	5
60	IKS24CM400	BHOOMIKA S	5
61	IKS24CM402	SUDHULAKUNTA AJAY KUMAR	5
62	IKS22CM004	ARPITA ANGADI	5
63	IKS22CM029	MANUSHREE	5

Signature of Course In charge

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DEPARTMENT OF COMPUTER AND COMMUNICATION ENGINEERING

ICT TOOLS USED FOR ACADEMIC 2024-2025 EVEN SEM

MODULE NAME	COURSE IN-CHARGE	COURSE CODE / TITLE
ICT TOOLS	Dr Shobha G	BBOC407/Biology for Engineers (CSE)


Events planned:

EVENT NAME	TENTATIVE DATE	COORDINATOR	TARGET AUDIENCES
ICT TOOLS	Semester Start to end	Dr Shobha G	Students

Teaching Pedagogy Planned:

COURSE CODE/TITLE	TEACHING METHODOLOGIES	TEACHING AIDS USED FOR MODULE
	Power point Presentations	MODULE - 1, 2, 3, 4, 5
	Quiz	MODULE - 1, 2, 3, 4, 5
	Demo Videos	MODULE - 3, 5


COURSE IN-CHARGE


HOD

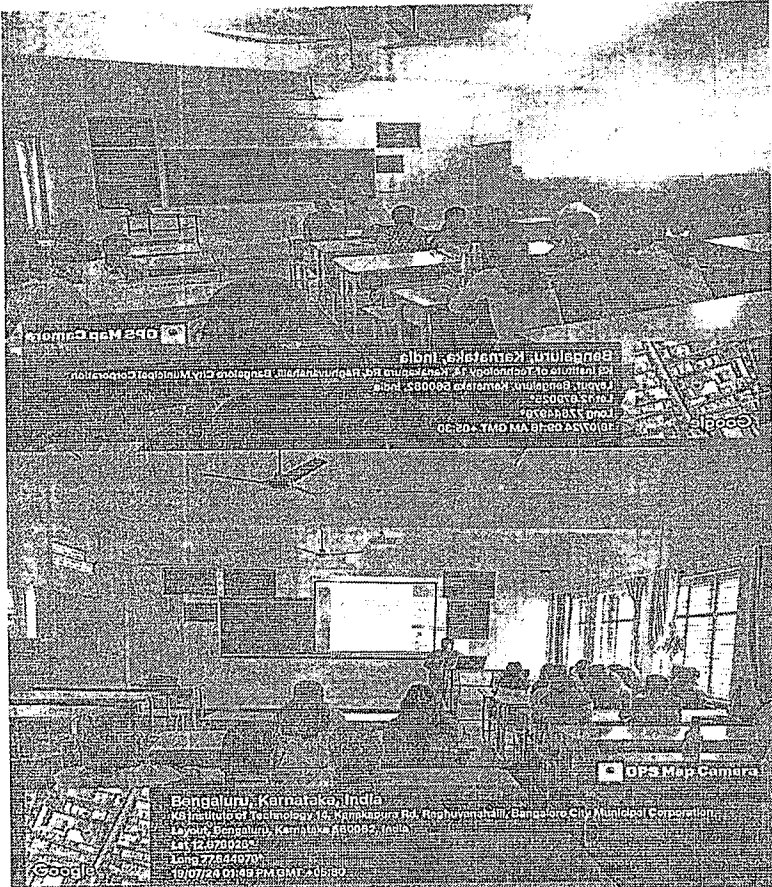
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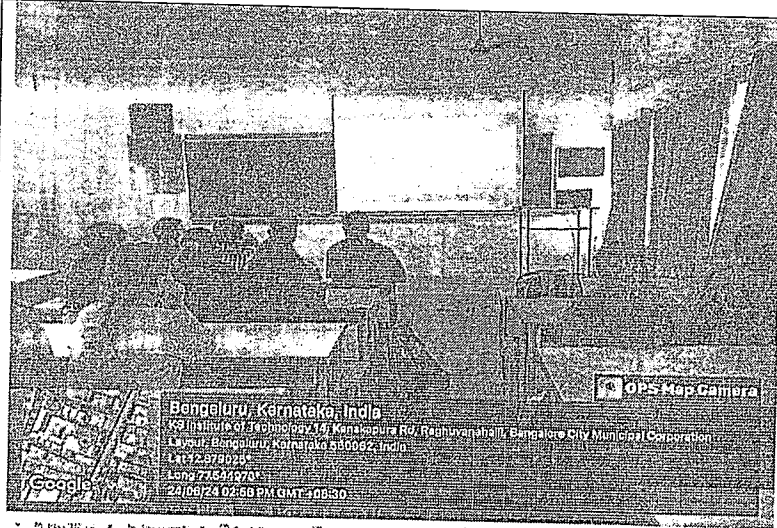


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DEPARTMENT OF COMPUTER AND COMMUNICATION ENGINEERING

TEACHING AND LEARNING

Proof of ICT tool usage

Academic Year	2024-25 (EVEN)
Name of the Faculty	Dr Shobha G
Course Name/Type/Code	Biology for Engineers(CSE) / Theory/ BBOC407
Sem/Section/stream	IV / CCE/CSE
ICT Used	Black Board Power-point Presentation Videos Quiz
	



Google Chrome browser window showing a table of data. The table has columns for various identifiers and names.

ID	Name	Phone Number	Address	City	State
1
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20

Web Links and Video Lectures (e-Resources)

- <https://www.youtube.com/watch?v=gDmoKnztn0A>
- <https://www.youtube.com/shorts/QvTMmoM13io>
- <https://www.youtube.com/watch?v=peJds2vP9Bo&t=7s>
- <https://www.youtube.com/watch?v=ilzynZvZm3c>
- https://www.youtube.com/watch?v=2kCjSq_1-0s
- <https://www.elprocus.com/electronic-nose-work/>

[Signature]
Signature of the Course In-charge

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CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	MANGALA S. HIEMATH
Course Name /Code	PRINCIPLES OF PROGRAMMING USING C
Semester/Section	II / J
Activity Name	Assignments and Programs
Topic Covered	<ul style="list-style-type: none">• The essential complementarity between <i>problem-solving ability</i> and <i>programming skills</i> to ensure effective and efficient software development, which are the core goals of all budding programmers.• A holistic perspective towards <i>logic building</i>, <i>algorithmic thinking</i>, and <i>programming practice</i> based on a clear understanding of computational thinking and real-world applications.• A holistic understanding of <i>programming constructs</i> in terms of data types, control structures, functions, arrays, pointers, and memory management.• Orientation input in C programming to the young enquiring minds, with hands-on assignments and programs to strengthen core programming concepts.
No. of Participants	57
Objectives/Goals	<ul style="list-style-type: none">• To develop a clear understanding of the fundamental concepts of the C programming language.• To enhance problem-solving skills through logical thinking and algorithm development.• To enable students to write, debug, and test C programs using structured and modular programming approaches.• To introduce students to key programming constructs such as variables, data types, operators, control statements, functions, arrays, pointers, and file handling.• To prepare students for advanced programming and real-world application development by strengthening their programming foundation.
Appropriate Method/Instructional materials/Exam Questions Assignments	
Relevant CO's	CO1,CO2,CO3,CO4,CO5
Relevant PO's	PO6,PO7,PO8,PO9,PO10
Significance of Results/Outcomes	Through this course, students built a strong foundation in structured programming using C. They learned core


```

void searchByName(char name[]) {
    FILE *fp = fopen("students.dat", "rb");
    struct Student s;
    int found = 0;

    if (fp == NULL) {
        printf("File not found.\n");
        return;
    }

    while (fread(&s, sizeof(s), 1, fp)) {
        if (strcmp(s.name, name) == 0) {
            printf("Record Found: ID: %d | Name: %s | Marks: %.2f\n", s.id, s.name, s.marks);
            found = 1;
        }
    }

    if (!found) {
        printf("No student named %s found.\n", name);
    }

    fclose(fp);
}

int main() {
    int choice, id;
    char name[50];

    do {
        printf("\n--- Student Record Management ---\n");
        printf("1. Add Student Record\n");
        printf("2. Display All Records\n");
        printf("3. Search by ID\n");
        printf("4. Search by Name\n");
        printf("5. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);
        getchar(); // Clear newline

        switch (choice) {
            case 1:
                addStudent();
                break;
            case 2:
                displayAll();
                break;
            case 3:
                printf("Enter ID to search: ");
                scanf("%d", &id);
                searchById(id);
                break;
            case 4:
                printf("Enter Name to search: ");

```

```
    fgets(name, sizeof(name), stdin);
    name[strcspn(name, "\n")] = '\0';
    searchByName(name);
    break;
case 5:
    printf("Exiting...\n");
    break;
default:
    printf("Invalid choice.\n");
}

} while (choice != 5);

return 0;
}
```

Expected Output:

--- Student Record Management ---

1. Add Student Record
2. Display All Records
3. Search by ID
4. Search by Name
5. Exit

Enter your choice: 1

Enter Student ID: 101

Enter Student Name: Alice

Enter Marks: 89.5

Student record added successfully.

--- Student Record Management ---

1. Add Student Record
2. Display All Records
3. Search by ID
4. Search by Name
5. Exit

Enter your choice: 1

Enter Student ID: 102

Enter Student Name: Bob

Enter Marks: 76.2

Student record added successfully.

--- Student Record Management ---

1. Add Student Record
2. Display All Records
3. Search by ID
4. Search by Name
5. Exit

Enter your choice: 1

Enter Student ID: 101

Enter Student Name: Alice

Enter Marks: 89.5

Student record added successfully.

--- Student Record Management ---

1. Add Student Record
2. Display All Records
3. Search by ID
4. Search by Name
5. Exit

Enter your choice: 2

All Student Records:

ID: 101 | Name: Alice | Marks: 89.50

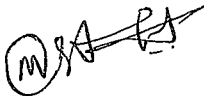
--- Student Record Management ---

1. Add Student Record
2. Display All Records
3. Search by ID
4. Search by Name
5. Exit

Enter your choice: 3

Enter ID to search: 101

Record Found: ID: 101 | Name: Alice | Marks: 89.50



Signature of the Course In-charge



Signature of HOD