



NARASARAOPETA ENGINEERING COLLEGE (AUTONOMOUS)

EMERGING TECHNOLOGIES



DEPARTMENT OF INFORMATION TECHNOLOGY

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K.Venkateswara Reddy
III – B.Tech. IT

VISION

To transform into a research and technological hub to develop prominent IT professionals to serve the needs of industry and society.

MISSION

The department of information technology is committed to

- M1:** Induce preliminary and contemporary IT principles of the industry among the students.
- M2:** Develop strong force of students to solve the real time problems of the IT industry.
- M2:** Incubate the students with emerging entrepreneur intelligence

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

The graduates of the programme are able to:

- PEO1:** Apply the knowledge of mathematics, science and engineering fundamentals to identify and solve IT and engineering problems.
- PEO2:** Use various software tools and technologies to solve problems related to academia, industry and society.
- PEO3:** Work with ethical and moral values in the multi-disciplinary teams and can communicate effectively among team members with continuous learning.
- PEO4:** Pursue higher studies and develop their career in software industry.

PROGRAM SPECIFIC OBJECTIVES (PSOS)

- PSO1:** Ability to understand, analyze and develop computer programs in the areas related to Algorithms, system software, application software, web design, big data analytics, database design and networking for efficient design of computer based systems of varying complexity.
- PSO2:** Design, Implement and evaluate a computer-based system to meet desired needs.
- PSO3:** Develop IT application services with the help of different current engineering tools.

PROGRAM OUTCOMES (POs)

- 1. Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.



6. The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

9. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

10. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

11. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Apply mathematical and scientific skills in numerous areas of Computer Science and Engineering to design and develop software-based systems.

PSO2: Acquaint module knowledge on emerging trends of the modern era in Computer Science and Engineering

PSO3: Promote novel applications that meet the needs of entrepreneur, environmental and social issues.

ARTICLE ON CLOUD COMPUTING

Abstract

Resource sharing in a pure plug and play model that dramatically simplifies infrastructure planning is the promise of "cloud computing". The two key advantages of this model are ease-of-use and cost-effectiveness. Though there remain questions on aspects such as security and vendor lock-in, the benefits this model offers are many. This article explores some of the basics of cloud computing with the aim of introducing aspects such as:

Realities and risks of the model

Components in the model

Characteristics and Usage of the model

An Overview

Cloud computing is a computing paradigm, where a large pool of systems are connected in private or public networks, to provide dynamically scalable infrastructure for application, data and file storage. With the advent of this technology, the cost of computation, application hosting, content storage and delivery is reduced significantly.

Cloud computing is a practical approach to experience direct cost benefits and it has the potential to transform a data centre from a capital-intensive set up to a variable priced environment.

The idea of cloud computing is based on a very fundamental principal of "reusability of IT capabilities". The difference that cloud computing brings compared to traditional concepts of "grid computing", "distributed computing", "utility computing", or "auto-nomic computing" is to broaden horizons across organizational boundaries.

Cloud Computing Models

Cloud Providers offer services that can be grouped into three categories.

Infrastructure as a Service (IaaS) – providing the infrastructure with elements such as servers, operating systems, networks, virtual machines, and storage.

Platform as a Service (PaaS) – this is a service used in developing, testing, and maintaining applications. It provides additional tools such as a database management system DBMS and Business Intelligence (BI) capabilities.

Software as a Service (SaaS) – this service connects users to the applications through the internet, usually on a subscription basis.

Desktop as a Service (DaaS) – it provides virtual desktops hosted by a supplier and accessible from anywhere through the internet.

Understanding Public and Private Clouds

Enterprises can choose to deploy applications on Public, Private or Hybrid clouds. Cloud Integrators can play a vital part in determining the right cloud path for each organization.

- **Public cloud** is cloud computing that's delivered via the internet and shared across organizations.

- **Private cloud** is cloud computing that is dedicated solely to your organization.

- **Hybrid cloud** is any environment that uses both public and private clouds.

This article looks at cloud computing at the highest level by:

- Defining cloud computing
- Exploring public, private, and hybrid cloud environments
- Sharing use cases and examples



Department of INFORMATION TECHNOLOGY



Cloud Computing Benefits

Enterprises would need to align their applications, so as to exploit the architecture models that Cloud Computing offers. Some of the typical benefits are listed below:

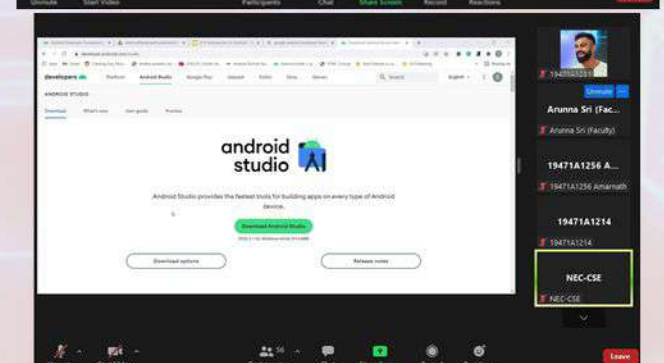
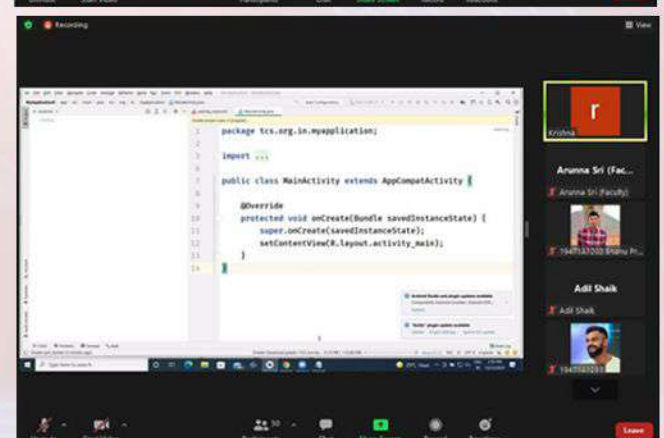
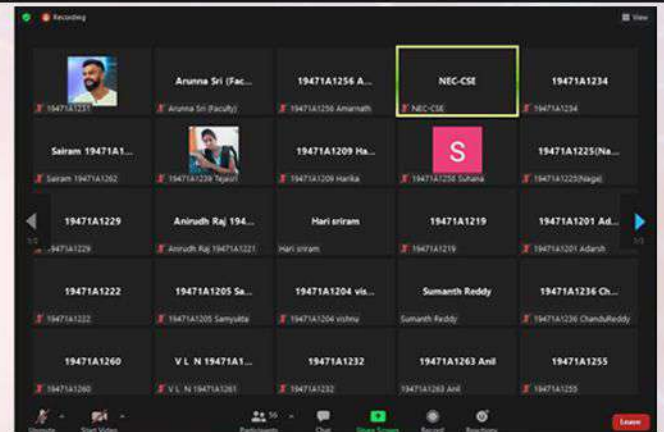
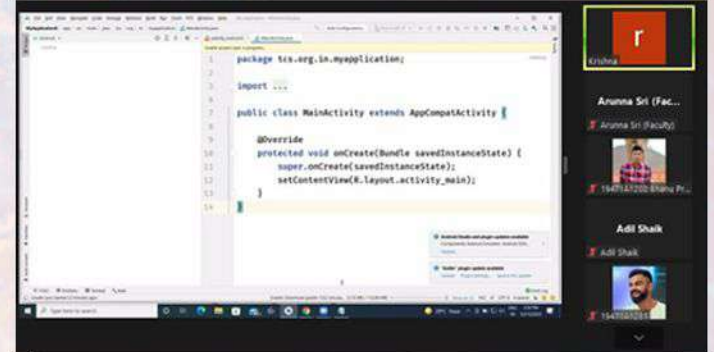
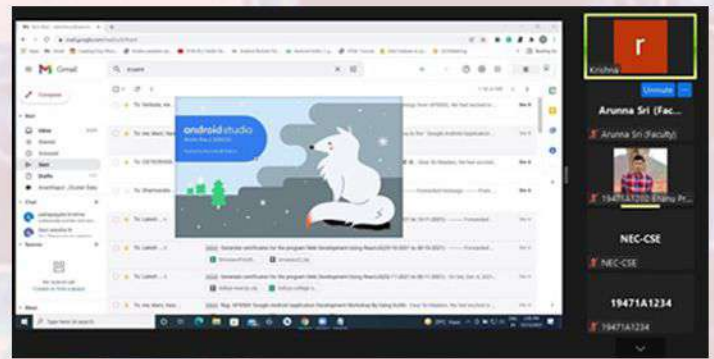
- 1) Back-up and restore data: Once the data is stored in the cloud, it is easier to get back-up and restore that data using the cloud.
- 2) Improved collaboration: Cloud applications improve collaboration by allowing groups of people to quickly and easily share information in the cloud via shared storage.
- 3) Excellent accessibility: Cloud allows us to quickly and easily access store information anywhere, anytime in the whole world, using an internet connection. An internet cloud infrastructure increases organization productivity and efficiency by ensuring that our data is always accessible.
- 4) Low maintenance cost: Cloud computing reduces both hardware and software maintenance costs for organizations.
- 5) Mobility: Cloud computing allows us to easily access all cloud data via mobile.
- 6) IaaS in the pay-per-use model: Cloud computing offers Application Programming Interfaces (APIs) to the users for access services on the cloud and pays the charges as per the usage of service.
- 7) Unlimited storage capacity: Cloud offers us a huge amount of storing capacity for storing our important data such as documents, images, audio, video, etc. in one place.
- 8) Data security: Data security is one of the biggest advantages of cloud computing. Cloud offers many advanced features related to security and ensures that data is securely stored and handled.

Cloud Computing Challenges

Despite its growing influence, concerns regarding cloud computing still remain. In our opinion, the benefits outweigh the drawbacks and the model is worth exploring. Some common challenges are:

- Security and Privacy
- Managing Cloud spend
- Lack of Resources/Expertise
- Governance/Control
- Compliance
- Managing multiple clouds
- Computing Performance
- Building a private cloud
- Portability
- Service Quality
- Interoperability
- Availability and Reliability

The Department of IT organized "Google Android Application Development Using Kotlin", Co-Ordinator by S.Chaitanya Bharathi from 13-12-21 to 24-12-21 for students and the resource persons are Mr. R.siva Ranga Nayakulu and Mr. N. Bangara Raju. Total 48 attended





NARASARAOPETA ENGINEERING COLLEGE

(AUTONOMOUS)



A Two Week Workshop
on

ANDROID APPLICATION DEVELOPMENT USING KOTLIN

during

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 C.N.V.S.R. SAMITHI 21471A1212 8.92	 S.H.N. SAHEB 21471A1266 8.92	 B. SRINIVASA REDDY 21471A1206 8.77	 T. DAVID KUMARI 21471A1259 8.77	 V.S.N. JYOTHI 21471A1247 8.62

Management, Principal, HOD & Faculty Express their Hearty Congratulations to Toppers in I B.Tech I Sem

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 V.L.S. LKITHA 19471A1260 8.63	 K.V. REDDY 19471A1227 8.44	 N. TEJA SRI 19471A1239 8.44	 G. RAVALI 19471A1215 8.31	 M.R. REDDY 19471A1232 8.31

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 K. ARUNA 20471A1227 8.47	 K. MUKHESH SAI 20471A1223 8.40	 V. YESWANTH 20471A1259 8.40	 K. SRIJA 20471A1232 8.33	 S.N. NAZMA 20471A1254 8.33

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STUDENTS ACHIEVEMENTS

S.No.	Certification Name	No. of Students Who Done Certifications	Certificate Model
1	NPTEL	18	
2	APSSDC	48	

