NEHRU INSTITUTE OF TECHNOLOGY

Approved by AICTE , New Delhi & Affiliated to Anna University , Chennai,
Kaliapuram , Thirumalayampalayam , Coimbatore - 641 105 , Tamilnadu

DEPARTMENT OF CSE

Academic year
2021- 2022
CSE

ABOUT THE DEPARTMENT

Our department is very keen in Academic exposure of the students to the latest domain trends by conducting a series of Seminars, Conferences, Guest Lectures, Faculty Development Programmes, Industrial Tours and Visits, etc. The Department of Computer Science and Engineering was started in the year 2008 with an intake of 60 students. The Department had started Post Graduate (ME.CSE) programme in the year 2012.

Department's Vision

To provide Curriculum driven industry oriented Quality Education in the field of Computing and moulds the students as Experts both in Education and research through effective Teaching and Learning process.

Department's Mission

- To impart fundamental studies in mathematics, science, general engineering and modernized Computer education and provide knowledge with effective teaching methodologies focusing on Nation building.
- To groom students to become specialized Computer Hardware and Software Engineers.
- To achieve global standards in education and Value based living through a social and Scientific Approach.
- To offer professional services to meet the requirements of industry, business and society.

HOD'S MESSAGE

"Predicting the Happenings of Future Miracles"

Hearty Welcome to the Department of CSE, Every Day of NIT-CSE Department starts with a dose of wisdom to blend and inculcate the professional skills in young minds for shaping their career. The Department offers both UG and PG Programme which primarily focus upon producing entrepreneurs and engineers to become globally competitive in delivering innovative solutions to diverse industrial domains. The Department has state of the art laboratory facilities for skill up gradation of students with new age skills like AI, Machine Learning, Data Science, Deep Learning and Big Data Analytics.

EDITORIAL BOARD'S MESSAGE

Dear Readers,

It gives us great pleasure to bring you the Computer science and Engineering Magazine —Nexus which will be released every year. The name and fame of an institute depends on the caliber and achievements of the students and teachers. The role of a teacher is to be a facilitator in nurturing the skills and talents of students. This magazine is a platform to exhibit the literary skills and innovative ideas of teachers and students. We would like to place on record our gratitude and heartfelt thanks to all those who have contributed to make this effort in a successful manner. We profusely thank our honorable CEO & Secretary Dr.P.Krishnakumar MBA, PhD and Principal Dr. M Sivaraja for giving support and encouragement and a free hand in this endeavor. Last but not the least we are thankful to all the authors who have sent their articles. We truly hope that the pages that follow will make an interesting read**.**

EDITORIAL STUDENT'S DESK:

Mr. ASHIK. K V - IV CSE
Mr. MOHAMAMED IRFAN.A – III CSE
Mr. KIRUBAKARAN. V- II CSE
Mr. ABISHEK.S - II CSE
Mr. SRIVENKATESH .R – I CSE

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

PEO1: To Apply their technical competence in computer science to solve real world problems, with technical and people leadership.
PEO2: Conduct cutting edge research and develop solutions on problems of social relevance.
PEO3: Work in a business environment, exhibiting team skills, work ethics, adaptability and life long learning.

PROGRAM OUTCOMES POs:

Engineering Graduates will be able to:
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: 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.

PO3: 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.

PO4: 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.

PO5: 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..

PO6: 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.

PO7: 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.

PO8: Ethics: : Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings..

PO10: 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.

PO11: 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..

PO12: 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 OBJECTIVES (PSOs)

PSO1: Exhibit design and programming skills to build and automate business solutions using cutting edge technologies.

PSO2: Strong theoretical foundation leading to excellence and excitement towards research, to provide elegant solutions to complex problems.

PSO3: Ability to work effectively with various engineering fields as a team to design, build and develop system applications.

INTERACTION ABOUT NEW TECHNOLOGY

OpenAI:

OpenAI is an AI research organization founded in 2015 by a group of technology leaders, including Elon Musk, Sam Altman, and Greg Brockman. OpenAI's mission is to create safe and beneficial AI systems that can be used to benefit humanity.

Some key areas of research and development for OpenAI include natural language processing, computer vision, robotics, and reinforcement learning. OpenAI has developed several notable AI models, such as GPT-3 (Generative Pre-trained Transformer 3), which is a language model capable of generating human-like text, and DALL-E, which can generate unique images from textual descriptions.

OpenAI is also known for its commitment to safety and ethics in AI development. The organization has established partnerships with other organizations, such as the Partnership on AI and the Future of Life Institute, to promote responsible AI research and development.

OpenAI has also created several tools and resources to make AI more accessible to developers and researchers, including the OpenAI API, which allows developers to use state-of-the-art AI models in their own applications.Overall, OpenAI is a leading organization in the field of AI research and development, with a focus on creating safe and beneficial AI systems that can be used to benefit humanity.

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5G technology:

5G technology is the fifth generation of mobile network technology that offers faster internet speeds, lower latency, and greater capacity than previous generations. It is the next step in the evolution of mobile networks and is expected to revolutionize the way we use the internet and connect with each other. No one company or person owns 5G, but there are several companies within the mobile ecosystem that are contributing to bringing 5G to life. Qualcomm has played a major role in inventing the many foundational technologies that drive the industry forward and make up 5G, the next wireless standard.

We are at the heart of the 3rd Generation Partnership Project (3GPP), the industry organization that defines the global specifications for 3G UMTS (including HSPA), 4G LTE, and 5G technologies.
3GPP is driving many essential inventions across all aspects of 5G design, from the air interface to the service layer. Other 3GPP 5G members range from infrastructure vendors and component/device manufacturers to mobile network operators and vertical service providers.

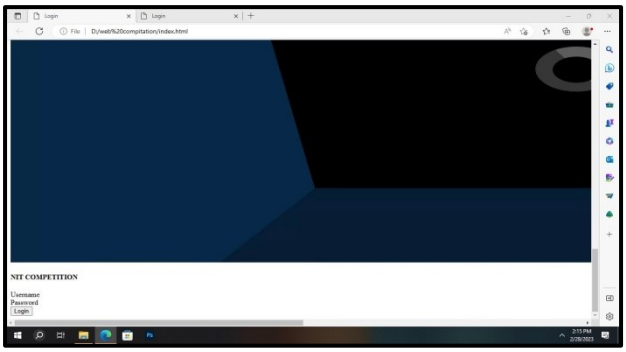
5G is designed to deliver peak data rates up to 20 Gbps based on IMT-2020 requirements. Qualcomm Technologies' flagship 5G solutions, the Qualcomm® Snapdragon™ X65 is designed to achieve up to 10 Gbps in downlink peak data rates.But 5G is about more than just how fast it is. In addition to higher peak data rates, 5G is designed to provide much more network capacity by expanding into new spectrum, such as mmWave
.5G can also deliver much lower latency for a more immediate response and can provide an overall more uniform user experience so that the data rates stay consistently high—even when users are moving around. And the new 5G NR mobile network is backed up by a Gigabit LTE coverage foundation, which can provide ubiquitous Gigabit-class connectivity.
Even though the downsides of 5G are clear when considering how easily mmWave can be blocked, or less clear considering radio frequency (RF) exposure limits, 5G still has plenty of worthy benefits, such as the following:

- **use of higher frequencies;**
- **high bandwidth;**
- **enhanced mobile broadband;**
- **a lower latency of 5 ms;**
- **higher data rates, which will enable new technology options over 5G networks, such as 4K streaming or near-real-time streaming of virtual reality (VR); and**
- **the potential to have a 5G mobile network made up of low-band, midband and mmWave frequencies.**

5G

Student Spot

WEB DESINING



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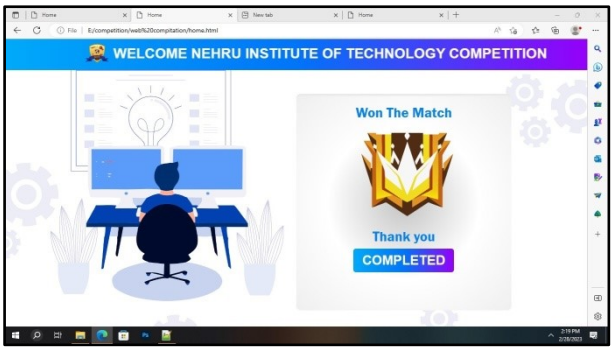

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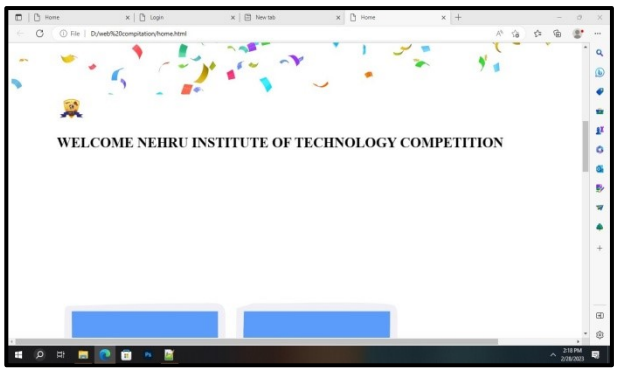

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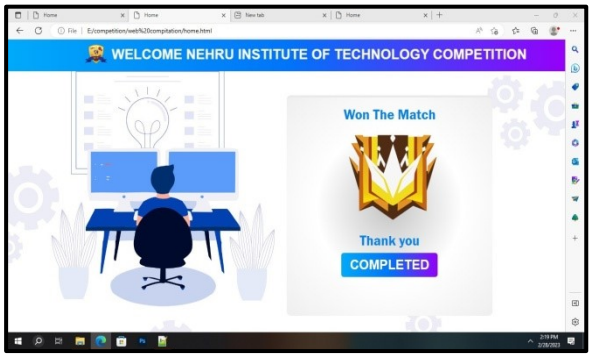

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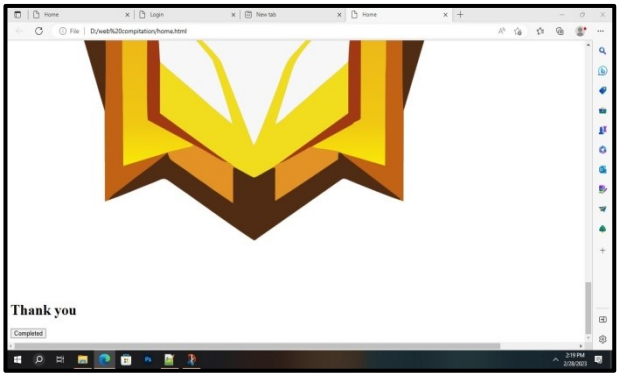

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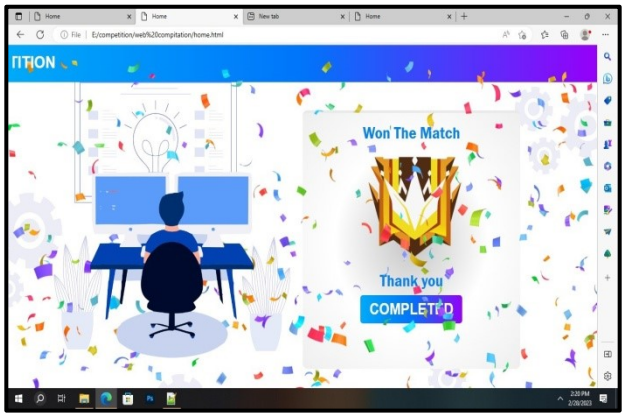

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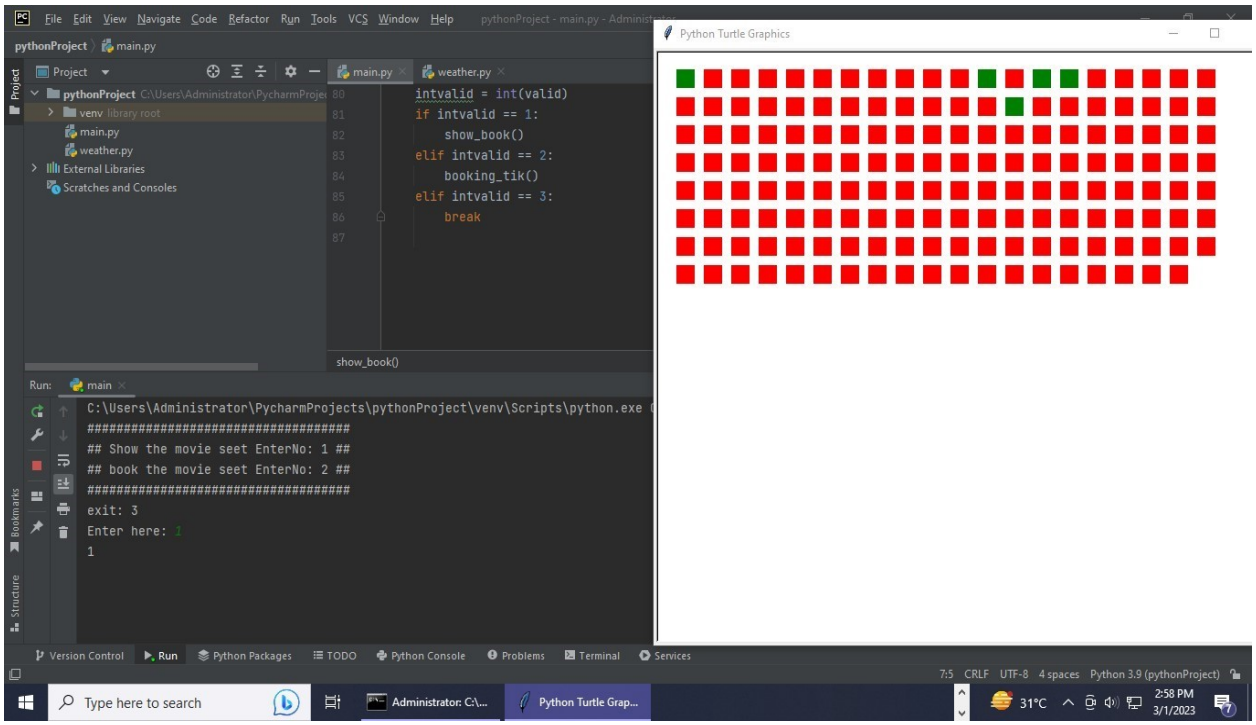
POSTER DESINING

CODE DEBUGGING



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