

**OPERATING SYSTEMS**

**Lab File**

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**Vision and Mission**

**Vision**

Department of Computer Science & Engineering to be a leading world class technology department playing its role as a key node in national and global knowledge network, thus empowering the computer science industry with the wings of knowledge and power of innovation

**Mission**

* To nurture talent of students for research, innovation and excellence in the field of computer engineering starting from Under graduate level.
* To develop highly analytical and qualified computer engineers by imparting training on cutting edge technology.
* To produce socially sensitive computer engineers with professional ethics.
* To focus on R&D environment in close partnership with industry and foreign universities.
* To produce well-rounded, up to date, scientifically tempered, design oriented engineers and scientists capable of lifelong learning

**Program Educational Objectives (PEOs)**

PEO 1: To acquire in-depth knowledge of software and hardware techniques which provide a strong foundation to pursue continuing education and nurture the talent for innovation and research.

PEO 2: To nurture the talent in leadership qualities, at an appropriate level in order to address the issues in a responsive, ethical and innovative manner.

PEO 3: To excel in careers by being a part of success and growth of an organization with whom they will be associated.

PEO 4: To inculcate the ability for lifelong learning by active participation in self-study courses, seminars, research papers

**Program Specific Outcome (PSOs)**

* PSO 1: Design, analyze and develop the engineering problems.
* PSO 2: Specify, design, develop, test and maintain usable systems that behave reliably and efficiently and satisfy all the requirements that customers have defined for them.
* PSO 3: Develop software systems that would perform tasks related to Research, Education and Training and/or E-governance.

**Program Outcomes**

* **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
* **Problem analyses:** Identify, formulate, review, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
* **Design/development of solution:** 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.
* **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.
* **Modern tool usage:** Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
* **The engineer and the 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.
* **Environment and sustainability:** Understand the impacts of professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
* **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
* **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
* **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.
* **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.
* **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.

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| 3. | WAP to implement “Priority Queue” job scheduling algorithm. |  |  |
| 4. | WAP to implement “Shortest Job First” job scheduling algorithm |  |  |
| 5. | WAP to implement “Shortest Remaining Time First” job scheduling algorithm |  |  |
| 6. | WAP to implement “Round Robin” job scheduling algorithm |  |  |
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**Practical 1**

**Problem Statement:**  WAP to count number of alphabets, numbers, special characters, spaces, lines in a text file.

**PROGRAM:**

**EXPERIMENT 2**

**Problem Statement:**  WAP to implement “First Come First Serve” job scheduling algorithm.

**PROGRAM:**