

**LAB Assignment No.-6**  
**Operating Systems**  
**(UCS – 303)**

Write a program using C/C++/Java to simulate the *FCFS*, *SJF* (pre-emptive as well as non-preemptive approach), *priority scheduling* and *RR*, CPU scheduling algorithms. **The scenario is:** user may input  $n$  processes with respective CPU burst time and arrival time (also take the priority number in case of priority scheduling). System will ask the user to select the type of algorithm from the list mentioned above. System should display the waiting time for each process, average waiting time for whole system, and final execution sequence.

**LAB Assignment No.-7**  
**Operating Systems**  
**(UCS – 303)**

**In details explanation of the following commands and topics:**

1. r/w/x permissions for directory.
2. **touch** command for modifying the access timings
3. **find** command
4. **umask** command
5. Hard link.
6. Symbolic links.
7. Directory and associated permissions.
8. Modification and access times.
9. Locating files.
10. expr – Computational and String handling

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**LAB Assignment No.-8**  
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Write a program using C/C++/Java to simulate the first fit, best fit and worst fit memory allocation strategy. Assume memory chunk and initial requirement for memory block from your side.

**LAB Assignment No.-9**  
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**In details explanation of the following commands and topics:**

1. Shell script
2. Read operation in shell script
3. Using command line argument
4. exit and EXIT status of commands
5. Logical operators &&, ||
6. Conditional construct – If
7. Using test AND [ ] to evaluate an expression
8. Numeric comparison
9. String comparison

**At least 4 Example programs from the mentioned book and from your own side.**

**LAB Assignment No.-10**  
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**In details explanation of the following commands and topics:**

1. Conditional construct - Case
2. Matching multiple patterns
3. expr – Computational and String handling
4. Looping – While, For

**At least 4 Example programs from the mentioned book and from your own side.**