

## **OS Lab Task-1**

**(Dr Anil Kumar, Dept of CSE)**

**Lab Task will be evaluated i.e marks will be assigned to each of these tasks. These marks are considered in Students Grade Evaluation as Part of Lab Component.**

**Students should write these program in their lab notebook. During evaluation, students should note down their test case results and get sign from the Faculty.**

**Deadline : Jan 17th during your lab session**

**Before coming to lab, students should solve the problems.**

**During Lab Session, Faculty will check programs and outputs. (Late Submission lead to penalty)**

**Students should not share their code with other students. If anybody copy code from others or Google, their programs will not be evaluated and they will not given any marks for that lab task.**

**Students can refer Google for their doubts but should not copy codes.**

**Note: During evaluation faculty will ask students to change the code or explain the code**

**Evaluation Criteria:**

**Each Question is evaluated for Max of 10 Marks:**

**Total Marks:  $4 \times 10 = 40$  Marks**

**In evaluation faculty checks following aspects:**

- 1. Usage of proper function names and variable names and, indentation**
- 2. Expected correct outputs for given inputs**
- 3. Error Handling**
- 4. You will be asked to change code on the spot or explain logic or part of the code**

**Question-1:**

**Write a unix script for the following:**

- 1. Print Your system configuration: (CPUs, RAM Size, Hard Disk, Number of Drives, Number of Network Interfaces, IP address, MAC address, Number of USB ports)**
- 2. Read list of files from any given directory**
  - a. Print the file name which is having maximum size**
  - b. Print the file name which is created most recently**
  - c. Print file names which contains “main()” and not “malloc”**

**Question-2:**

**Given Following Contents in a File: ( Three Columns)**

<b>EMPNUM</b>	<b>DEPT</b>	<b>SALARY</b>
1	CSE	10000
2	ECE	20000
3	ECE	40000
4	CSE	10000
1	ECE	20000
2	CSE	40000
3	CSE	10000
4	ECE	20000
1	CSE	40000

Using above file Write shell script for the following:

a) Compute using script and Print as following:

EMPNUM	TOTALSAL
1	70000
2	60000
3	50000
4	30000
SUM: 210000	

b)

DEPT	Count
CSE	5
ECE	4

Max Employees are in CSE Dept.

Question-3:

Write script for the following:

- a) Print only unique lines of a given file
- b) Delete all duplicate lines from a given file and print the contents of the file
- c) Duplicate first 5 lines of the file and paste at end of the file
- d) Given a C program file, comment 10 to 20 lines

Question-4:

Open 3 Terminals using Shell Script and run above scripts. (Questions 1, 2 and 3).  
(AUTOMATION of running your scripts)