



FAST-NUCES, Karachi
Fall-2020 - BS(SE) - Final Exam
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Course Code	CL-118	Course	PF Lab
Student ID		Section	

Instructions:

- ☐ This paper includes **01 Scenario and 4 Questions**.
- ☐ There are **02** Pages.
- ☐ All questions must be done in a **one file**.
- ☐ Function Names **MUST BE EXACTLY SAME AS MENTIONED.**

Time: 90 minutes.**Max Marks:** 40 points**MAIN SCENARIO:**

You are working as a freelance software developer. Your client have asked you to design and build a software that will manage details of Employee's work on a software. Following are the details for the software tasks.

- Employees have to log their time w.r.t each task they are working on. Tasks are divided into 3 levels.
 - Level - 01 -- This is the most time taking activity. (more than 8 hours)
 - Level - 02 -- This activity can be done in 1 day. (7-8 hours)
 - Level - 03 -- Multiple Level 03 Activities can be done in 1 day. (2-3 hours)

Requirement 01

Create the following Function

```
void AssignTask(struct Emp* empPtr, int taskId)
```

This Function assigns the task, with given Task ID, to the employee. (Max 3 Tasks per Employee)

Requirement 02

Create the following Function

```
void PrintTaskTimeLog(struct Task tsk)
```

This function prints the time log for the task w.r.t to the level of task. Also the time Logged for this task (if any).

Requirement 03

Create the following Function

```
void LogTaskTime(struct Emp* empPtr, struct Task* tskPtr, int time)
```

This function Logs the time for the task. Also adds the time to the Employees Logged Time.

Requirement 04

Create the following Function

void PrintEmpTaskList(struct Emp emp)

This function prints the list of the tasks assigned to an Employee.

Requirement 05

Create the following Function

void SetTaskEstimation(int tskID, int estTime)

This function sets the time estimation for the Task.

Requirement 06

Create the following Function

void AssignBulTasks(int es, struct Emp empList[es], int ts, struct Task tskList[ts])

This function assigns the given list of task to the list of employees. (Keep in Mind Max 3 Tasks per Employee). Left Tasks are also mentioned (if any).

Requirement 07

Create the following Function

void PrintEmployeeTimeDetails(struct Emp emp)

This function prints the time details (time assigned, time logged, remaining / excess time) for the given employee.

Requirement 08

Create the following Function

void RecursivelyPrintEmployeesInTxtFile(int es, struct Emp empList[es], FILE *fptr)

This function prints the given list of employees in the given file (using recursion).

Requirement 09

Create the following Function

struct Emp NewEmp()

This function returns a new Employee with all the default values.

Requirement 10

Create the following Function

struct Task NewTask()

This function returns a new Task with all the default values.