Fast**National University of Computer & Emerging Sciences, Karachi  
Programming Fundamentals (Lab)**

**FINAL fall 2020 – CS-Department**

**2nd January 2021, Timing: 8:30 am to 10:00 am**

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| **Course Code: CL118** | **Course Name: Programming Fundamentals LAB** | |
| **Instructor Name / Names:** | | |
| **Student Roll No:** | | **Section:** |

**Instructions:**

* Return the question paper.
* Read each question completely before answering it. In case of any ambiguity, you may make assumption. But your assumption should not contradict any statement in the question paper.
* All the answers must be solved according to the sequence given in the question paper.
* Exam paper consist of two pages.
* Create a folder on Desktop and name it your roll number.
* This folder must contain a single c source file (Implemented all the parts mentioned in Q1) along with the text file used in the given question
* Submission Process: Type IP [**\\172.16.5.41**](file:///\\172.16.5.41) **-> Programming Fundamentals 8:30 to 10:00 -> Teacher nameX -> SectionX**

**Time: 80 minutes. 50 points**

**Question # 01: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Suppose you are working in a Multinational Company as Software Engineer and your Manager is hiring new employees and your manager asked you to organize the records and your task is to create a STRUCT Employee. The Employee Structure contain the following data members Emp\_id, Emp\_name (complete name), salary age, department (depart\_id and depart\_name)

**\*Here department is nested struct in Employee. (Marks 5)**

1. Write a program in C by using pointer to structure and store data in text file named after your roll number e.g. ***K20XXXX.txt*** for 5 employees and retrieve the data from the same file. Read the file and print it on the console/terminal screen. **(Marks 15)**
2. Write a function that finds all employees working in department Y whose average salary is greater than the maximum salary of department X. **(Marks 15)**

**Hint: Don’t use any built-in function like max, min and avg.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| S.No | Emp\_id | Emp\_name | Salary | Age | Depart\_id | Depart\_name |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

1. Write a function name **Replace()** to update Emp\_name attribute in existing filewhich replace the space between the employee name by minus signs. **(Marks 5)**
2. Read the updated file and print the details of only those employees whose Department is X and having age greater than 30 years on the console/terminal screen. **(Marks 5)**
3. Write a function named delete() which takes Emp\_id as input and delete the record of that employee and save it in the file.

**(Marks 5)**

**------------------------BEST OF LUCK----------------------**