

## INSTRUCTION

Rename the file to your Student ID only. Submit only one file. I will sort all the cpp files.  
So if you don't follow these instructions it will take more time for me to find your task.

### MileStone 1:

There are two categories of Person present in University. One is **Student** and the other one is **Staff**. Students have some unique features like **student ID, program** he/she studies (BSc CSE, BSc EEE, MSc CSE, MSc EEE, PhD CSE, PhD EEE). Staff has some unique features like **joining date, designation, Office/Department** he/she belongs to. Both the student and staff have some common features like **name, contact number**.

Use a display function to display all the information of any Person. In display show which type of Person he/she is (student, staff etc)

### MileStone 2:

Every person in that university has a **password (not string a char pointer)** which is alphanumeric. The password needs to be auto generated using a function. This password will be created when a person will be created.

The password must be stored using dynamic memory allocation, (using **new** operator). So password will be pointed by char pointer. You need to manage memory allocation manually.

The format of the password has following set of rules:

- For **Students** It has to contain 5 **uppercase** letters, 4 **lowercase** letters, 1 **numbers**, 2 **special characters** (punctuation etc). It can be in any order.
- For **Staff** It has to contain 2 **uppercase** letters, 5 **lowercase** letters, 4 **numbers**, 1 **special characters** (punctuation etc). It can be in any order.

### MileStone 3:

In this university staff can also be students. **Staff\_student** has the unique feature **number\_of\_credits** he/she is taking per semester. For **Staff\_Student**, the password format follows the same ruleset of staff.

### MileStone 4:

Create a **non-member** function **addContactPrefix(Person\*)** which adds **+88** at the beginning of the contact number of a person. Display the information to confirm that your function worked.