

O b j e c t O r i e n t e d P r o g r a m m i n g

Homework 01

Marks 10

Instructions

Work on this homework individually. **Absolutely NO collaboration is allowed. Any traces of plagiarism would result in ZERO marks in this homework and possible disciplinary action.** Task should be coded in **C++**. You are strictly **NOT ALLOWED** to include any additional data-members/functions/constructors in your class. **Write the *main* function first and keep testing the functionality of each function once created.**

Due Date

Paste the solution (source code **.cpp** file) labeled with your complete **roll number (capital letters e.g., BITF21M000)** in **BSIT – HW 01** and **BSCS – HW 01** folders for **BSITF21** and **BSCSF21** sections respectively till **05:00PM Monday, February 13, 2023**. These folders are available at **\\printsrv\Teacher Data\Umar Babar\Students**.

ADT: Employee

Write a class named **Employee** for which each object can hold information about a particular employee:

- The class should have following **four private data members**.
 - A **string** named **name** that holds the **employee's name**.
 - An **integer** named **id** that holds the **employee's ID number**.
 - A string named **department** that holds the **name of the department** where the employee works.
 - A string named **position** that holds the **employee's job title**.
- Provide the implementation of following **constructors** and a **destructor**.
 - A **constructor** that accepts **employee's name, employee's ID number, department, and position** as arguments and assigns them to the appropriate member variables.
 - A **constructor** that accepts **employee's name and ID number** as arguments and assigns them to the appropriate member variables. The **department and position** fields should be assigned an **empty string ("")**.
 - A **default constructor** that assigns **empty string ("")** to the **name, department, and position member variables**, and **0** to the **id** member variable.
 - A **copy constructor** to initialize an employee's object with already existing object.
 - A **destructor** that does nothing except displaying a simple message "Destructor executed..." on the screen.
- Provide the implementation of **properties methods (get/set)** for all the data members (name, id, department, and position) of the class.
- Provide the implementation of following member functions.
 - setInfo** method accepts **employee's name, employee's ID number, department, and position** as arguments and assigns them to the appropriate member variables.
 - getInfo** method to **initialize the data** of an employee **taken** from the user.
 - putInfo** method to display the **information** of a particular employee.
- Test the functionality of **Employee** class by creating its **five objects** to hold the following data in **main** function,

Name	Id Number	Department	Position
Naveed Ali	1230	Computer Science	Assistant Professor
Nouman Abdullah	1231	Software Engineering	Lecturer
Naeem Ahmad	1241	Computer Science	Lecturer
Nadia	1242	Information Technology	Assistant Professor

The program should store this data in the five objects and then display the data for each employee on the screen in the appropriate format.

**Failure to abide by the submission instructions will cause a penalty of two marks.
No submission will be accepted after the due date and time.**

B E S T O F L I C K