Faculty of Computer Science and Engineering

GIK Institute of Engineering Sciences and Technology

CS-323 :: Object Oriented Analysis and Design (Spring 2022)

Assignment # 2

Due Date: Friday, April 01, 2022	**Total Points = 50**

- This homework is comprised of three tasks.
- Upload on Teams a zip archive named hw02_[your_reg_no].zip (where [your_reg_no] is replaced with your Reg No) with one answer-folder for each homework task (names hw02-1, hw02-2, hw02-3).

Question 1: ***hw02-1*** **[10 Points]**

Write a class "***Teacher***" that contains the attributes teacher ***name***, ***age*** and ***address***. It also contains member function to input and display its attributes. Write another class "***Writer***" that contains the attributes writer ***name***, ***address*** and ***number of books*** written by him. It also contains member functions to input and display its attributes. Write a third-class "***Scholar***" that inherits both "***Teacher***" and "***Writer***" classes.

The answer-folder for this task contains source code (.java) file.

Question 2: ***hw01-2*** **[20 Points]**

GIK pays its employees weekly. The employees are of four types: Salaried employees are paid a fixed weekly salary regardless of the number of hours worked, hourly employees are paid by the hour and receive overtime pay for all hours worked in excess of 40 hours, commission employees are paid a percentage of their sales and base-salary-plus-commission employees receive a base salary plus a percentage of their sales. For the current pay period, the GIK has decided to reward base-salary-plus-commission employees by adding 10 percent to their base salaries. The GIK wants to implement a Java program that performs its payroll calculations polymorphically.

The answer-folder for this task contains the source code (.java).

Question 2: ***hw01-3*** **[20 Points]**

GIK is a private research university located in Topi, Swabi, Khyber Pakhtunkhwa, Pakistan. GIK has eight academic faculties. Each department has its own rules. If they want to communicate with another faculty, they need a third-party communicator. So, you need to implement a java program in which FSCE faculty class and FSME class can transfer information using an interface.

The answer-folder for this task contains the source code (.java).