SLIIT
Discover Your Future

BSc (Hons) in Information Technology
Year 2

Online Exam

IT2030 – Object Oriented Programming Semester 1, 2022

Instructions on submitting the assignment:

1. Copy all the java classes into a single notepad file and rename it with your student id.
2. Upload to the course web for the relevant center link visible during the time frame.

**** Students are strictly advised to following the submission guidelines. Any student answer which is not following the correct instructions when submitting, will not be assessed.**

****Please note that "Gradescope" will be used to check the plagiarism and the plagiarism benchmark will be 40%. (If the similarity report shows the code similarity percentage as 40% or above it will consider as copied.)**

Question: You have been asked to develop a simple system to handle Employees in a Company.

1) **Create** a class called `Employee` to represent the details of an `Employee`.

   a) Include the following ***data members*** to the `Employee` class.
   `EmpId, name, address` (all are string data)
   b) Your class should have a constructor that initializes all instance variables.
   c) Include a method called `void Read()` which will input the above values from the keyboard
   d) Include a method called `void Print()` to display the properties.

2) **Extend** the `Employee` class and make a class called `Manager` to represent the details of a `Manager`.
   a) Include the following ***data members*** to the `Manager` class.
   `Department, ProductNo1, ProductNo2, ProductNo3` (`ProductNos` are integers, `Department` is a `string`)
   b) Your class should have a constructor that initializes all instance variables.
   c) Include a method called `void Read()` which will input the above values from the keyboard, call the `Employee` class `Read()` method to input the `EmpId, name`, and `address` as well.
   d) Use a `Try Catch` in the `Read()` method to validate the entry of numbers for the three `ProductNos`.
   e) Include a method called void `Print()` to display the `Manager` details, call the `Employee` class `Print()` method as well to display `Employee` details.

3) Create a class called `EmployeeApp` with the main function.

a) Use an `ArrayList` to store two `Employee` Class Objects and two `Manager` Class Objects.
b) You should only allow the `Employee` class and the descendants of the `Manager` class to be stored in the `ArrayList`
c) Display all the 4 objects stored in the `ArrayList` by calling each object's `Display()` method.