Tutorial Week 4

IT1050 – Object Oriented Concepts   **Semester 1, 2023**

Objectives : Learn how to identify Objects, Classes and Properties

Work with another student to find answers together to these questions. If you have doubts check with your Tutors. After you have found the solutions, attempt the given Tutorial Quiz where you individually have to submit your answers.

Exercise 1 – Identify Objects and Classes

Professors can teach several courses. A course, in turn, can be taught by several professors. For example, the course Business Information Systems is taught by Ms. Lakmali and Mr. Jagath. The course Database Management is taught by Ms. Samanthi only. When there are too many students registered for a course, an exam can be distributed among several exams running simultaneously, e.g. the same exam taking place in different lecture halls or even on different dates. For example, the multiple choice exam of Business Information Systems is taken by 300 students distributed across lecture hall 301, lecture hall 302 and lecture hall 303. Ms. Samanthi takes oral exams. She takes 15 students per day, meaning that she requires 4 days to interrogate the 60 registered students.

Professor : Ms. lakmali, Mr Jagath , Ms Samanthi
Courses : BIS , DM
Students

Exam : BIS DM
LectureHall : number , Exam

Read the scenario described above and Identify the classes and objects in the above description.

Exercise 2 – Identify Objects and Classes

The software system is supposed to manage information about Employees. Employees can be of two categories, namely Permanent Employees and Contract Basis Employees. An Employee has a name, address, phone number and an employee id. A Permanent Employee has a name, address, phone number, employee id and basic salary. A Contract Basis employee has a name, address, phone number, employee id, hourly rate and hours worked. At the end of the every month, the system must calculate the total payments for each Employee.

The company sells products such as Milk powder, liquid milk, yoghurt and butter. Ajith is a Permanent Employee who received an allowance (30% of basic salary) for last month as he met with his targets in selling more than 10000 packs of Milk powder last month.

Read the scenario described above and Identify the classes and objects in the above description.

employee :
permanantEmployee : Ajith
contractBasisEmployee :
products : Milk powder, liquid milk, yoghurt , butter

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Exercise 3 – Identify Properties

The software system is supposed to manage information about Employees. Employees can be of two categories, namely Permanent Employees and Contract Basis Employees. An Employee has a name, address, phone number and an employee id. A Permanent Employee has a name, address, phone number, employee id and basic salary. A Contract Basis employee has a name, address, phone number, Employee id, hourly rate and hours worked. At the end of the every month, the system must calculate the total payments for each Employee.

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Read the scenario described above and Identify the properties for the following classes.

    a) Employee   name, address , phone number , employee id
    b) Permanent Employee   basic salary
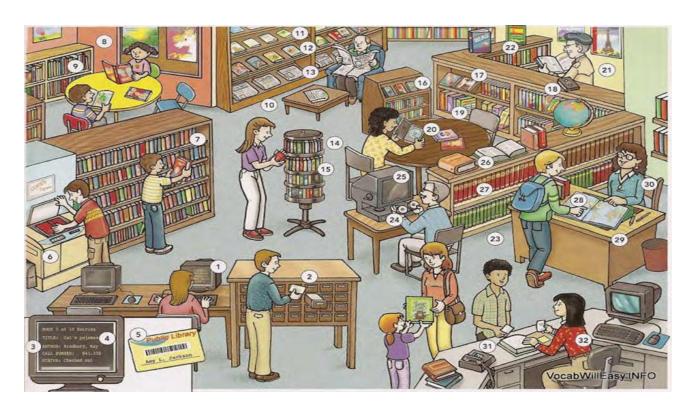   c) Contract Employee   hourly rate , hours worked

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Exercise 4 – Identify Objects and Classes

a) Identify the Objects in the above Picture
b) Group these Objects into Classes

Now submit your answers by answering the Tutorial 04 Quiz individually. If you have very different Objects and Classes please check with your Tutors.