

Learning from Peer Mistakes: Collaborative UML-Based ITS with Peer Feedback Evaluation.

Supplementary Material.

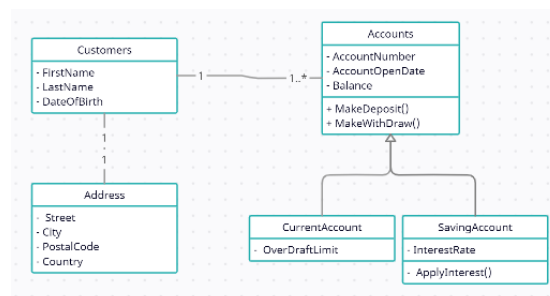
Supplementary S1: Pre-Test

This Pre-Test is conducted as part of Research project. It aims to collect data about student's understanding of UML Class diagrams. The Pre-test contains 8 cases. Completing each question should take few minutes. In some questions you are given a set of UML diagrams and are asked to answer a question about these diagrams. The personal information would not be disseminated to any third party and will be kept confidential. Your sincere co-corporation is required for accurate results of this research project.

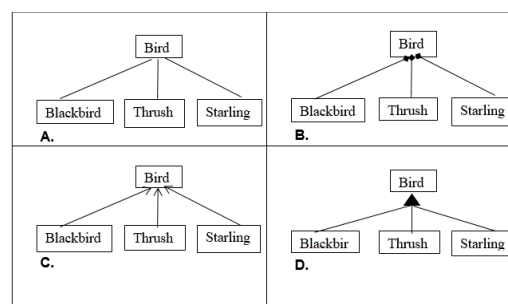
Name:	_____	Department:	_____
Gender:	Male <input type="checkbox"/>	Female	<input type="checkbox"/>
Age:	(18–22) <input type="checkbox"/>	(23–26)	<input type="checkbox"/> (27–30) <input type="checkbox"/>

Q1: Create a class diagram for a university to show Person information. A Person can have Name, Phone Number, Email Address and Address (including Street, City, State, Postal Code and Country name). If Person is an employee then it should contain Salary, and if the person is Student, then it should contain Student ID and Average Marks.

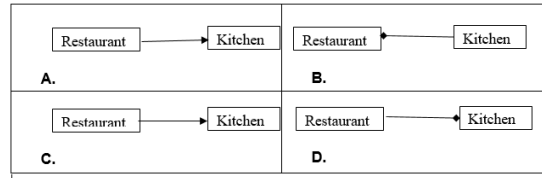
Q2: Write down the description of the following diagram in your own words.



Q3: How do you model the following situation with a UML class diagram? There are multiple different bird species, e.g., Blackbird, Thrush and Starling.



Q4: How do you model the following situation with a UML class diagram? Every restaurant has at least one kitchen, one kitchen is part of exactly one restaurant.



Q5: Find out classes in the following scenario. A fair is visited by at least one visitor. One visitor visits at least one fair.

A. Fair B. Visitor C. Visited D. Both A and B

Q6: Which of the following relationship is most appropriate to represent given situation? Person has an Address

A. _____ B. _____
C. _____ D. _____

Q7: Which of the following shows strong relationship with the parent class?

A. _____ B. _____
C. _____ D. _____

Q8: find out attribute in the following description.

An Artist can compose one or more Albums. Each Album with Name and Downloading Link can contain many songs. A song can only belong to one Album.

A. Song B. Name C. Album D. Artist

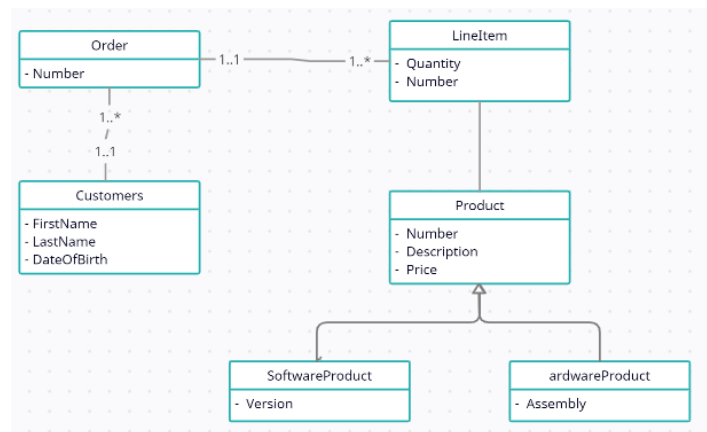
Supplementary S2: Post-Test

This Post-test is conducted as part of Research project. It aims to collect data about student's understanding of UML Class diagrams. The Pre-test contains 8 cases. Completing each question should take few minutes. In some questions you are given a set of UML diagrams and are asked to answer a question about these diagrams. The personal information would not be disseminated to any third party and will be kept confidential. Your sincere co-corporation is required for accurate results of this research project.

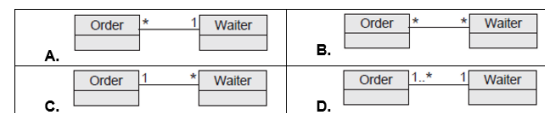
Name: _____ Department: _____
Gender: Male ☐ Female ☐
Age: (18–22) ☐ (23–26) ☐ (27–30) ☐

Q1: Create a class diagram that contains information about Company. A Company has Offices and Departments. A Company and Department have name and Offices have address. Each department has many Employees and can have Name, Phone Number, Email Address. A company has many headquarters and each headquarter is type of Office.

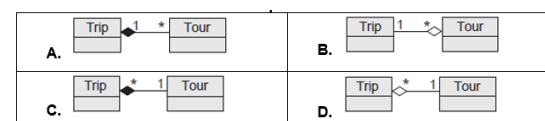
Q2: Write down the description of the following diagram in your own words.



Q3: How do you model the following situation with a UML class diagram: An order is made with exactly one waiter, one waiter handles multiple orders?



Q4: How do you model the following situation with a UML class diagram? A trip can only contain one tour, one tour can be included in several trips or one tour can be moved from one trip to another.



Q5: To model classes in the diagram, _____ are analyzed in the textual requirements description.

A. Verbs **B.** Nouns **C.** Adverbs **D.** Both A and B

Q6: Which of the following relationship is most appropriate to represent given situation? A brain is part of human.

A. _____ **B.** _____
C. _____ **D.** _____

Q7: _____ allows a class to inherit the behavior of another class.

- | | |
|-----------------|-----------------|
| A. _____ | B. _____ |
| C. _____ | D. _____ |

Q8: Which of the following is the most likely list of attributes related to customer class in following description?
In the Pizza restaurant, Customers will be able to order from a fixed set of drinks, such as cola and lemonade flavors, each in large or small size. Customers will be known by their name and address.

- A.** Cola, lemonada **B.** Large, small **C.** Flavors, Size **D.** Name, Address.