



COURSE NAME: SOFTWARE ENGINEERING

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SEMESTER 4<sup>TH</sup>

SECTION A

STUDENT ID: 14480

**QUESTION 1:** The pizza ordering system.

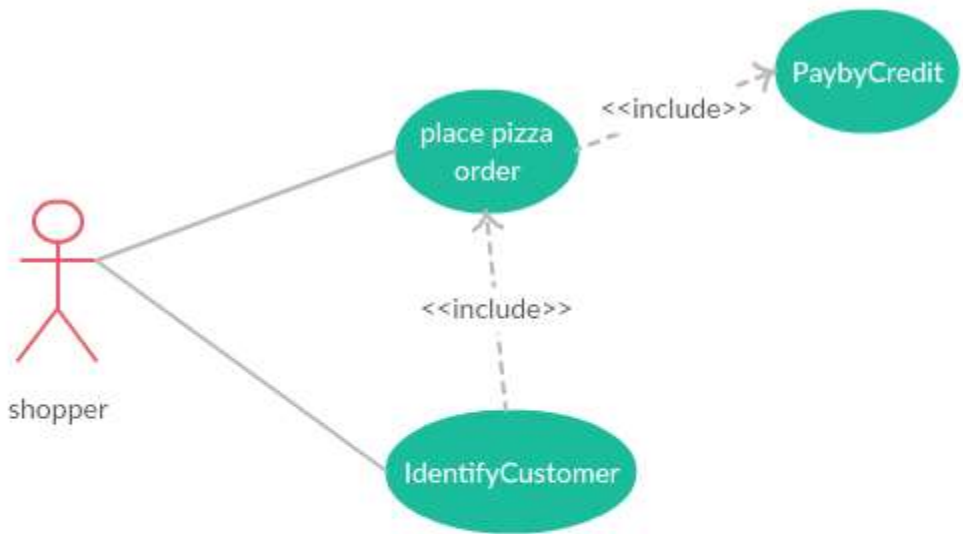
The pizza ordering system allows the user of a web browser to order pizza for home delivery. To place an order, a shopper searches to find items to purchase, adds items one at a time to a shopping cart, and possibly searches again for more items.

When all items have been chosen, the shopper provides a delivery address. If not paying with cash, the shopper also provides credit card information.

Develop a use case diagram, for a use case for placing an order, PlaceOrder. The use case should show a relationship to two previously specified use cases, IdentifyCustomer, which allows a user to register and log in, and PayByCredit, which models credit card payment.

**ANSWER:**

START \_\_\_\_\_



Is link is optional

**QUESTION 2:** Suggest how an engineer responsible for drawing up a system requirements specification might keep track of the relationships between functional and non-functional requirements.

**ANSWER:**

The developer will have to make a System Requirements Document. The developer can provide documentation for each functional and non-functional requirement. The developer must use natural language for non-functional and formal language for functional requirements. Functional requirements are beyond the developers and implemented. Non-functional requirements are what the user wants and what does not come from software development. The developer must also ensure that the non-functional requirements conflict with the operational requirements.

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**QUESTION 3:** To reduce cost and the environmental impact of commuting, your company decides to close a number of offices and to provide support for staff to work from home. However, the senior management who introduce the policy are unaware that is developed using agile methods, who introduce the policy are unaware that software is developed using agile methods, which rely on close team working and pair programming. Discuss the difficulties that this new policy might cause and how you might get around these problems.

**ANSWER:**

If a company decides to shut down many offices that specialize in the use of agile methods they can face many difficulties.

When a company is run by a close and split team they will not be able to have daily meetings, which can create communication issues, the installation of pairs would not be possible, the communication box will be built, the product will go down due to communication issues, and the acquisition of errors will be very difficult.

These problems can be avoided by building joint offices to integrate both systems and daily communications.

If that doesn't happen, a communication platform containing webcams, desktop viewing software, and a microphone should be created to allow better communication.

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**QUESTION 4:** Discover difficulties / ambiguities or omissions in the following statement of requirements for part of a ticket-issuing system.

An automated ticket-issuing system sells rail tickets. Users select their destination and input a credit card and a personal identification number. The rail ticket is issued and their credit card account charged. When the user presses the start button, a menu display of potential destinations is activated, along with a message to the user to select a destination. Once a destination has been selected, users are requested to input their credit card. Its validity is checked and the user is then requested to input a personal identifier. When the credit transaction has been validated, the ticket is issued.

**ANSWER:**

Ambiguities and Omissions:

Can a customer buy multiple tickets the same where you go together or they have to be bought on time?

Customers can cancel the request if an error is made done?

How should the system respond if the card is wrong input?

What happens when consumers try to place their card before choosing your destination (as they would with ATM machines)?

Should the user press the start button again they wish to buy one ticket to another where you going?

If the program sells tickets only in between the station where the machine is located and directs communication or should include everything possible locations?

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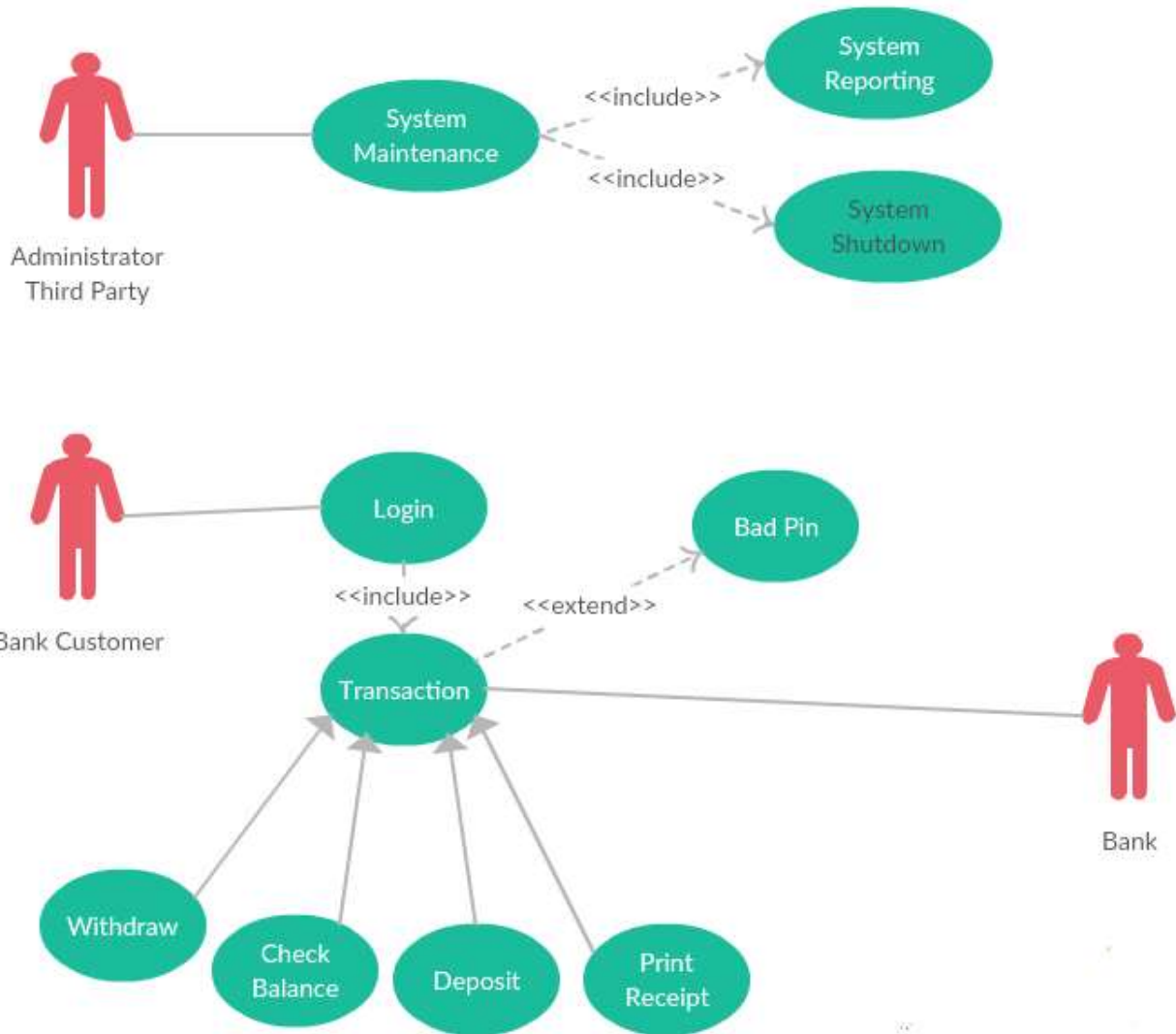
**Question 5:**

Using your Knowledge of how an ATM is used, develop a set of use cases that could serve as a basis for understanding the requirements for an ATM system.

**ANSWER:**

- The user places the card on the reader. ATM is requesting a PIN. The user has entered the PIN correctly. The ATM displays the user's bank details and the user withdraws the money. ATMs transfer money.
- The user places the card on the reader. The card cannot be read. The ATM identifies the error and issues the card.

- The user places the card on the reader. ATM is requesting a PIN. The user has entered the PIN incorrectly 5 times. The ATM warns of a card card that can be stolen.



THE END

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