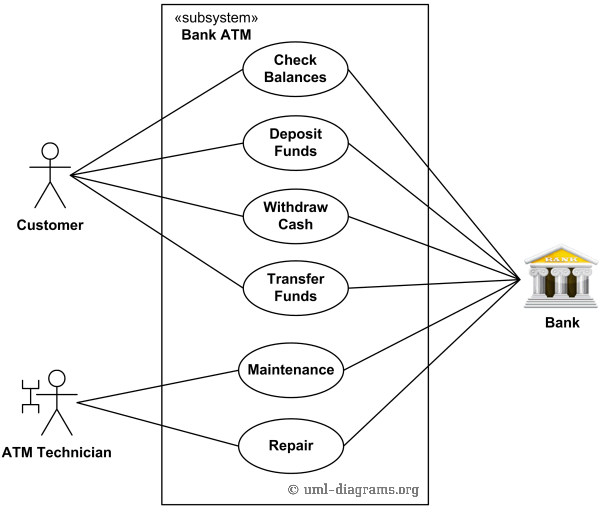
**Question 1: Given the following system description and use case diagram, write use case description for *Withdraw Cash*.**

**Bank ATM**

An automated teller machine (ATM) is a banking subsystem that provides bank customers with access to financial transactions in a public space without the need for a cashier, clerk or bank teller.

Customer uses bank ATM to check balances of his/her bank accounts, deposit funds, withdraw cash and/or transfer funds. ATM Technician provides maintenance and repairs. All these use cases also involve Bank actor whether it is related to customer transactions or to the ATM servicing.



*Withdraw Cash*

|  |  |  |
| --- | --- | --- |
| **Use Case name:**withdraw cash | |  |
| **Primary actor:Customer** | **Other actors:** | |
| **Description:**This use case describes how a Bank Customer uses an ATM to withdraw money from a bank account. | | |
| **Relationships**   * **Includes:** * **Extends:** | | |
| **Pre-conditions:**   * The bank Customer must have a **bank card**. * The network connection to the **Bank System** must be active. * The system must have at least some cash that can be dispensed. * The cash withdrawal **service option** must be available. | | |
| **Actor** | **System** | |
| 1. The use case begins when the actor **Customer** inserts their **bank card** into the card reader on the ATM. 2. The customer enters the PIN number. 3. The Customer selects to withdraw cash. 4. The Customer selects an amount to be withdrawn. 5. The Customer takes the bank card from the machine. | * 1. The system reads the bank card information from the card.   2. The system asks for PIN number.   3. The system verifies the PIN number   4. The system displays the service options that are currently available on the machine.   3.1 The system prompts for the amount to be withdrawn by displaying the list of standard withdrawal amounts.  4.1 The system ejects the Customer’s **bank card**.  5.1 The system dispenses the requested amount of cash to the Customer.  5.2 The system records a transaction log entry for the withdrawal. | |
| **Alternative and Exceptional flows:**   * 1. The system verifies the PIN number:      1. No communication with bank {…………}      2. No communication with customer account {……..}      3. Inactive card {……….}      4. Invalid PIN {…………….} | | |
| **Post-conditions:**   * The ATM has returned the card and dispensed the cash to the Customer and the withdrawal is registered on the Customer’s account. * The ATM has returned the card to the Customer and no withdrawal is registered on the Customer’s account. * The ATM has returned the card but has not supplied the amount of cash registered as withdrawn from the Customer’s account. The discrepancy is registered in the ATM’s log. * The ATM has kept the card, no withdrawal has registered on the Customer’s account and the Customer has been notified where to contact for more information. | | |

**Sequence diagram**

