**Indian Institute of Information Technology, Allahabad**

**Object Oriented Methodology (OOM)**

**Lab Assignment-02**

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**Question - 1**

**Coin Operated Pay Phone**

This case study involves a simplified system of a coin-operated pay phone.

1. The minimum cost of a call is 20 pence.

2. After inserting the coins, the user has 2 minutes to dial a number (this time limit is enforced by the switchboard40).

3. The line may be free or engaged.

4. The caller may hang up first.

5. The pay phone uses up money as soon as the callee picks up the receiver and with each unit of time (UT) generated by the switchboard.

6. The caller can add more coins at any time.

7. After hanging up, any unused change is returned.

From these seven sentences, we will progressively work through the following tasks:

* Draw the use case diagram of the coin-operated pay phone.
* Draw the class diagram for the above given case study

**Question - 2**

**Automatic Teller Machine (ATM)**

This case study concerns a simplified system of the automatic teller machine (ATM). The ATM offers the following services:

1. Distribution of money to every holder of a smartcard via a card reader and a cash dispenser.

2. Consultation of account balance, cash and cheque deposit facilities for bank customers who hold a smartcard from their bank. Do not forget either that:

3. All transactions are made secure.

4. It is sometimes necessary to refill the dispenser, etc.

From these four sentences, we will work through the following activities:

* Identify the actors, use cases and construct a use case diagram.
* Write a textual description of the use cases
* Organize and structure the use cases. Construct class diagram for ATM.
* Propose another, more sophisticated version of this preliminary use case diagram.
* Complete the preliminary use case diagram by adding the secondary actors. To simplify matters, leave out the maintenance operator for the time being.