CRC Cards & Analysis Class Diagram

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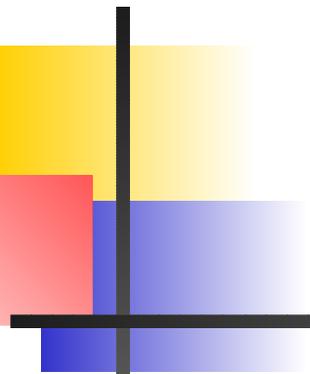
Outline

1. Introduction to CRC Card

2. CRC for ATM System

3. Analysis Class Diagram

4. Example of Analysis Class Diagram

5. Questions ?

What is CRC Card

1. CRC stands for class-responsibility-collaborator.

2. It is an OO modeling technique, easy, simple but powerful.

3. Introduced in 1989 by Kent Beck and Ward Cunningham.

4. A CRC Card model is a collection of index cards having three sections:- Calss, Responsibility and Collaborator.

CRC Card Layout

Class Name:	
Super Classes:	
Sub Classes:	
Responsibilities	**Collaborators**

Responsibiblity & Collaborators

Responsibility contain two key items:

1. The knowledge that the object maintains

2. The actions the object can perform

They say WHAT gets done, not HOW its done

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Collaborators are class whose knowledge or services are needed to fulfill a responsibility.

CRC For ATM

ATM	
Responsibilities	Collaborators
Receive card information	CardReader
Display a prompt to Take input a PIN from keyboard	
Send PIN to Bank for validation	Bank
Display validation errors	
Display menu, accept a choice from keyboard	
Display a prompt, accept a dollar amount from keyboard	
Ask Bank for balance	Bank
Respond to cancel key being pressed by customer	
Respond to eject key being pressed by customer	CardReader
Promt message for printing receipt	
Respond to Print Receipt key pressed by customer	Printer

Table 1: CRC Card for ATM Class

CRC For CardReader

CardReader	
Responsibilities	Collaborators
Receive Card from Customer	
Validate Card	
Send Card informaiton to ATM	ATM
Receive request to Eject card	
Eject Card	

Table 2: CRC Card for CardReader Class
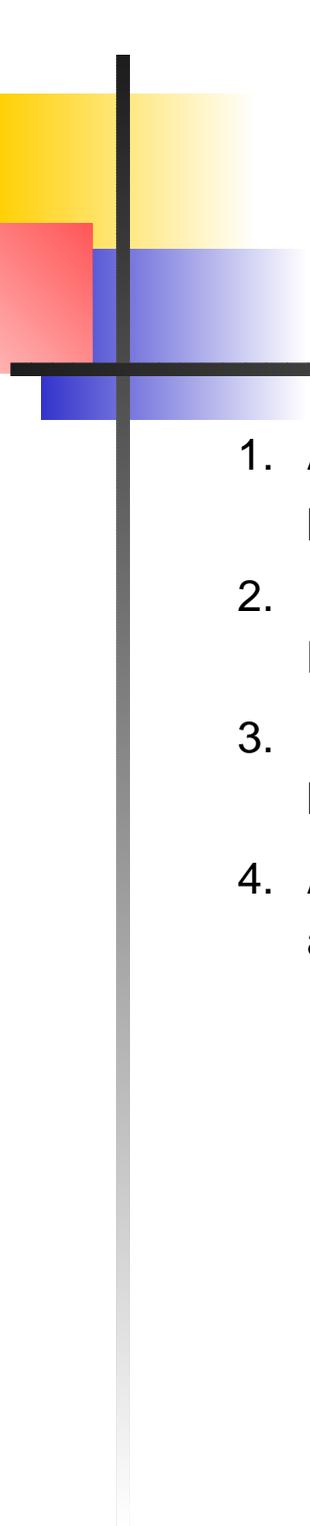
Analysis Class Diagram

1. At the very beginning of a project's modeling, class diagram can be used to produce a conceptual models of the system.

2. It is not the design of the system, and it rarely survise into the design without heavy changes.

3. It describes only key classes of a system and classes are in the forms of boundaries, controls and entities.

4. Analysis class diagram is an abstraction of the system to aid in understanding architecture.

Boundaries

Actors communicate with the internal components of a system through boundary classes, i.e, graphical user interfaces(GUIs), system interfaces or device interfaces. They are drawn as circles with a short line to the left attached to a vertical line the same height as the circle.

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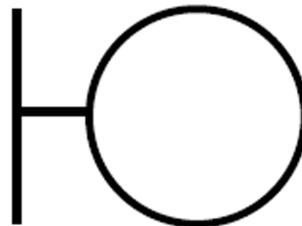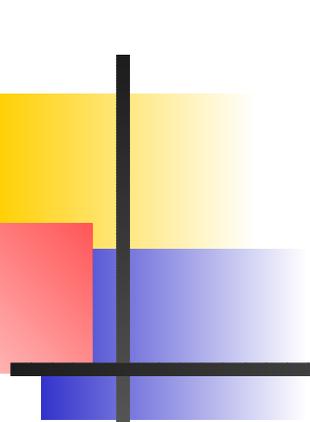
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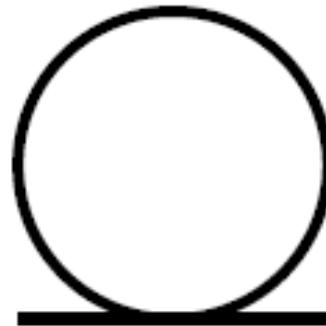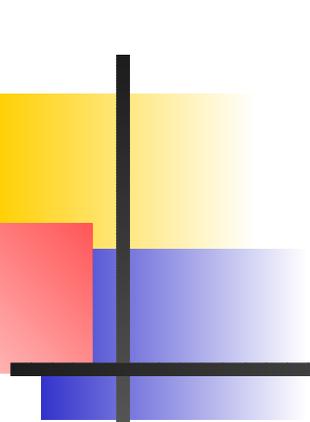
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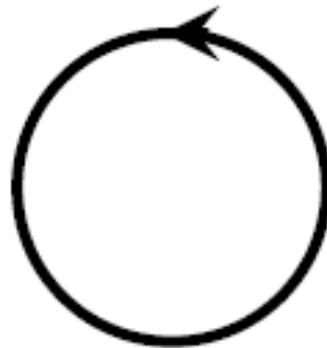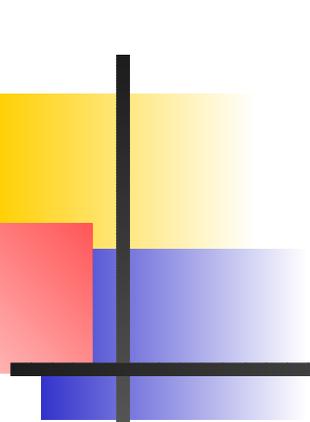
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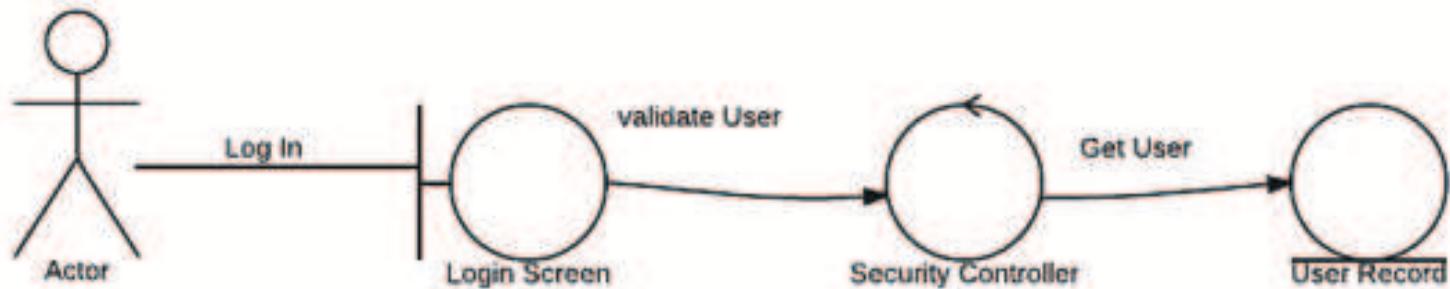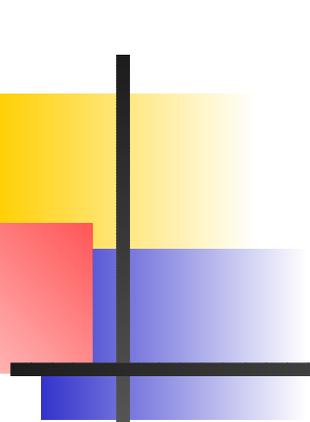
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Figure 2: Model-View-Controller Architecture
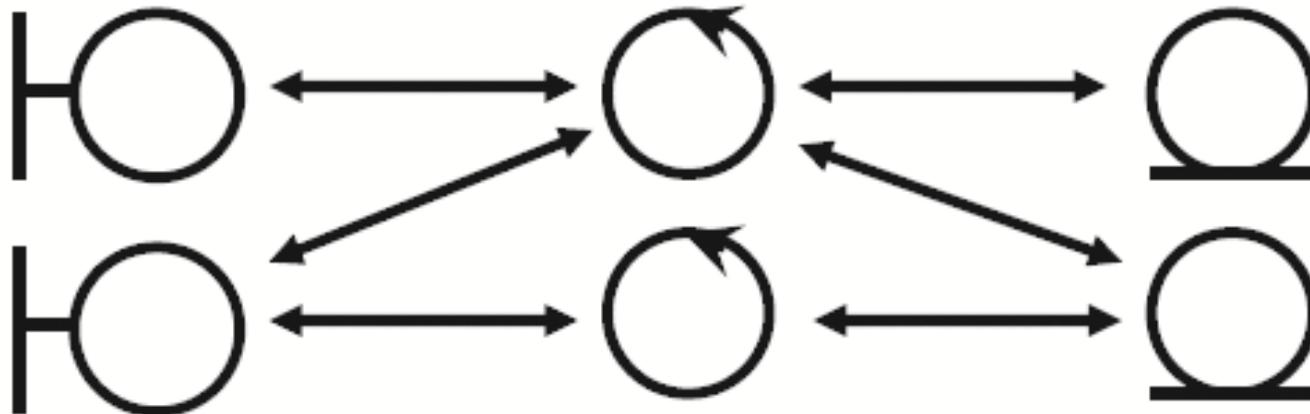
Example..

Figure 3: Client-Server Architecture

Questions??