Professional Development Award in Software Development (Level 8)

CodeClan

Bridging the digital skills gap

PDA Guidance

Focus of Guidance

Covering Material Specifically Needed For The PDA

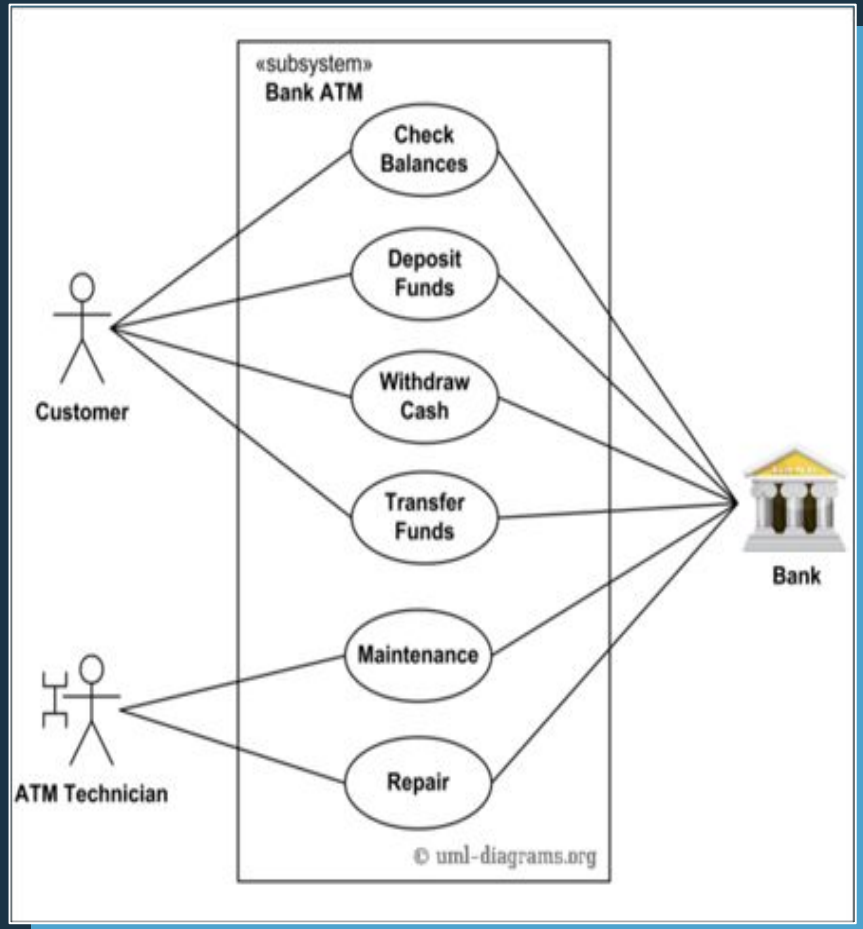
- Google is not your friend when it comes to the PDA
- Standardized approach = pass/fail criteria
- Copy of this guidance in repo

Use Case Diagrams

Use case diagrams give an overview of the usage requirements for a system.

Use case diagrams depict:

- Use cases (actions)
- Actors
- Associations
- System boundary boxes (optional)

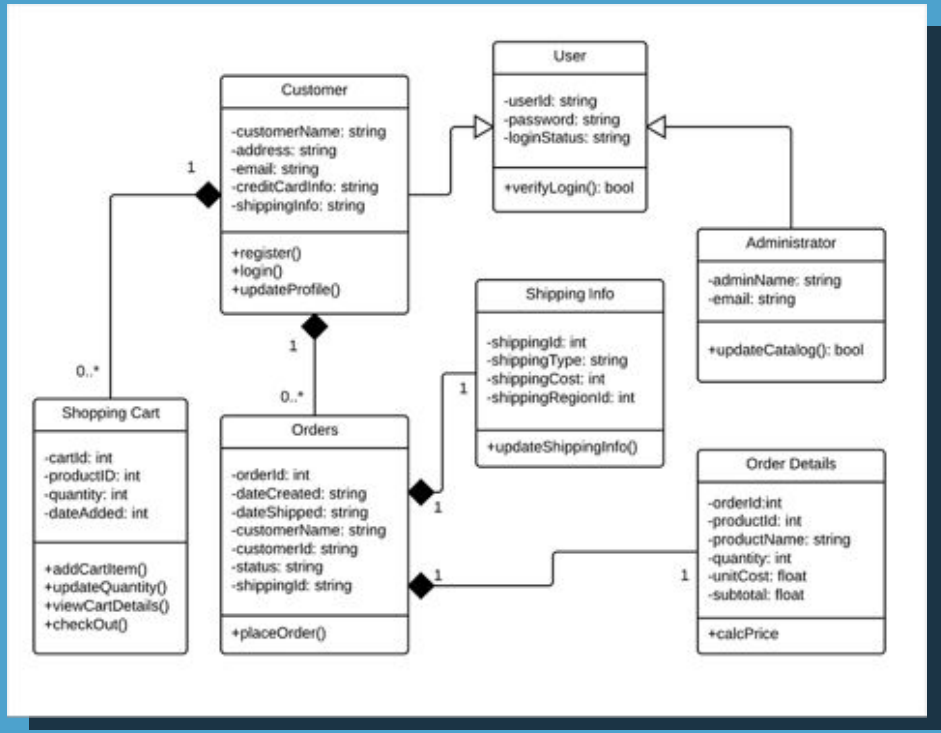


Class Diagrams

Class diagrams describe the structure of a system by showing the system's classes, their attributes, methods and the relationships.

Class diagrams should include:

- Name of each class
- Attributes of each class
- Type of each attribute
- Methods
- Relationships

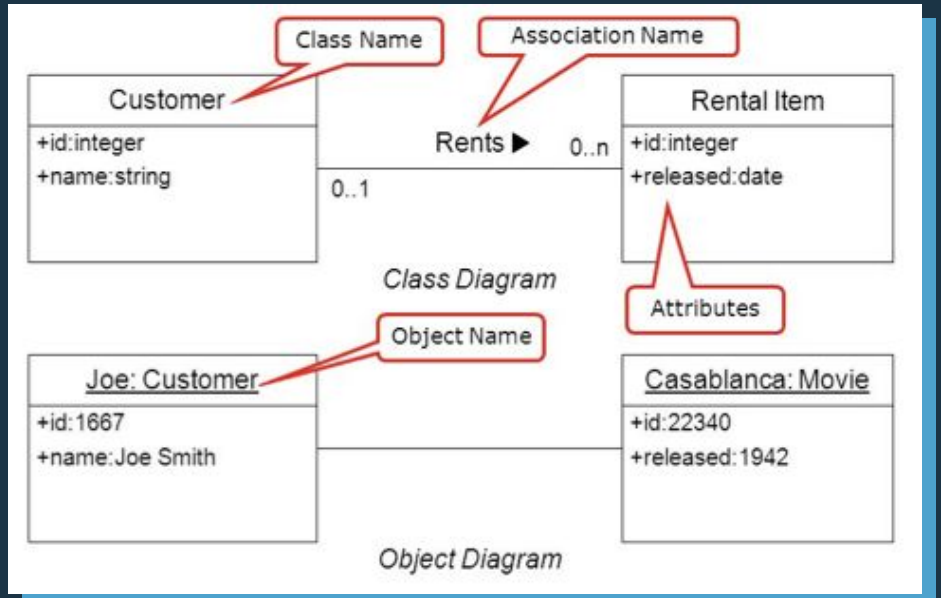


Object Diagrams

Object diagrams provide examples or act as test cases for class diagrams.

Object diagrams should include:

- Name of the class
- Instance of that class
- Attributes of each class
- Type of each attribute replaced with an example
- Relationships

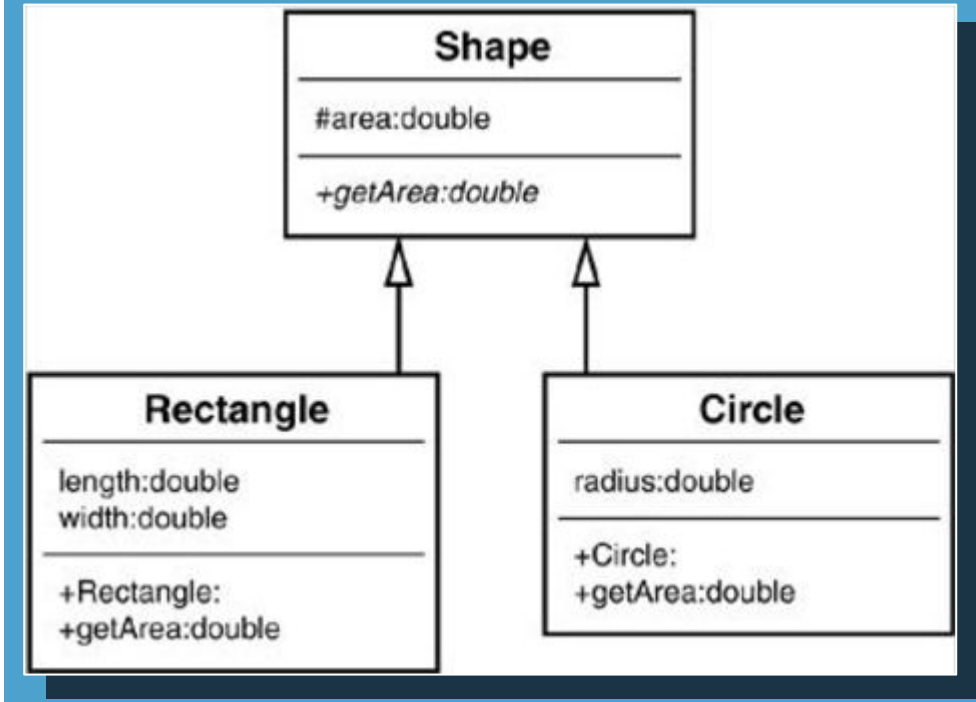


Inheritance Diagrams

An inheritance diagram demonstrates when a child object assumes characteristics of its parent object.

Inheritance diagrams should include:

- Relationships (using arrows)
- Name of the class
- Attributes of each class
- Type of each attribute
- What is inherited (explicitly)



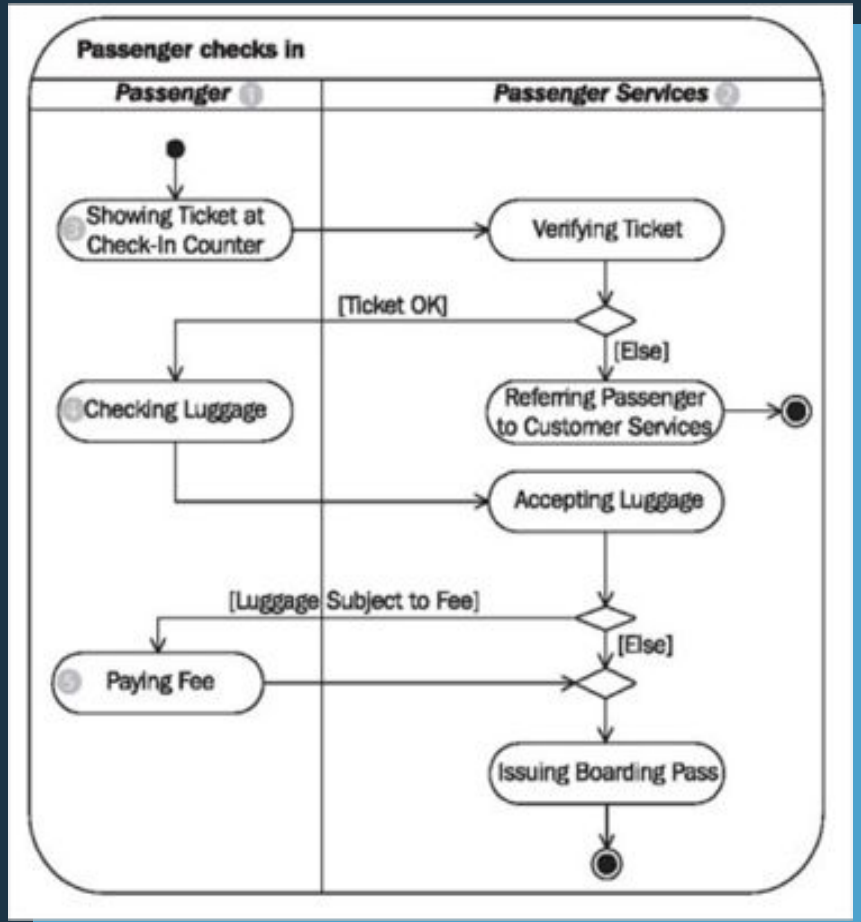
Activity Diagrams

An Activity Diagram is a flowchart to represent the flow from one step in an activity to another.

This helps to plan what is needed in the system and how it should be structured.

Activity diagrams should include:

- lines with arrows
- rounded rectangles (actions)
- diamonds (decisions)
- black circle (start of the workflow)
- encircled black circle (the end)



Implementation Constraints Plan

Implementation constraints are things that might constrain the project and stop it from reaching its full potential.

Constraint Category	Implementation Constraint	Solution
Hardware and Software Platforms	What could be a constraint on the product? How it could be a constraint of the product? Why is it a problem?	What could be a constraint on the product? How it could be a constraint of the product? Why is it a problem?
Performance Requirements		
Persistent Storage and Transactions		
Usability		
Budgets		
Time Limitations		

Acceptance Criteria and Test Plan

An Acceptance Criteria is a set of statements with a clear pass/fail result. Acceptance Criteria should state intent, but not a solution.

An Acceptance Test Plan is the final two columns of this table.

Acceptance Criteria	Expected Result	Pass/Fail
A user is able to...	The ... does ... when ...	Pass/Fail

System Interaction Diagrams

System interaction diagrams look at the flow of control and data among the things in the system.

There are two types of system interaction diagrams:

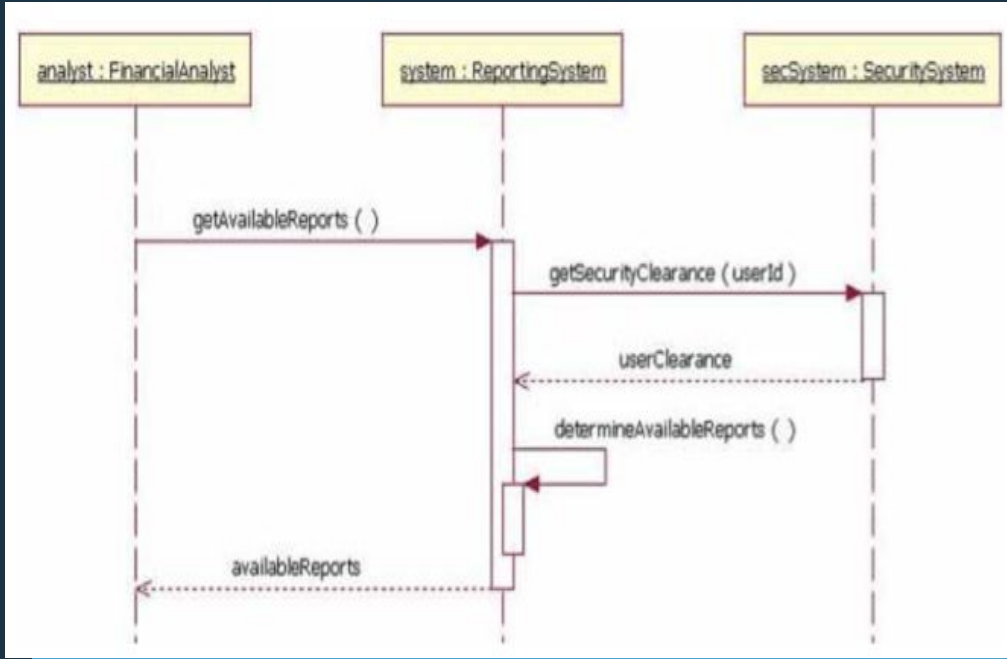
- **Sequence Diagrams**

- **Collaboration Diagrams**

Sequence Diagram

The behaviour of objects in a use case by describing the objects and the messages they pass.

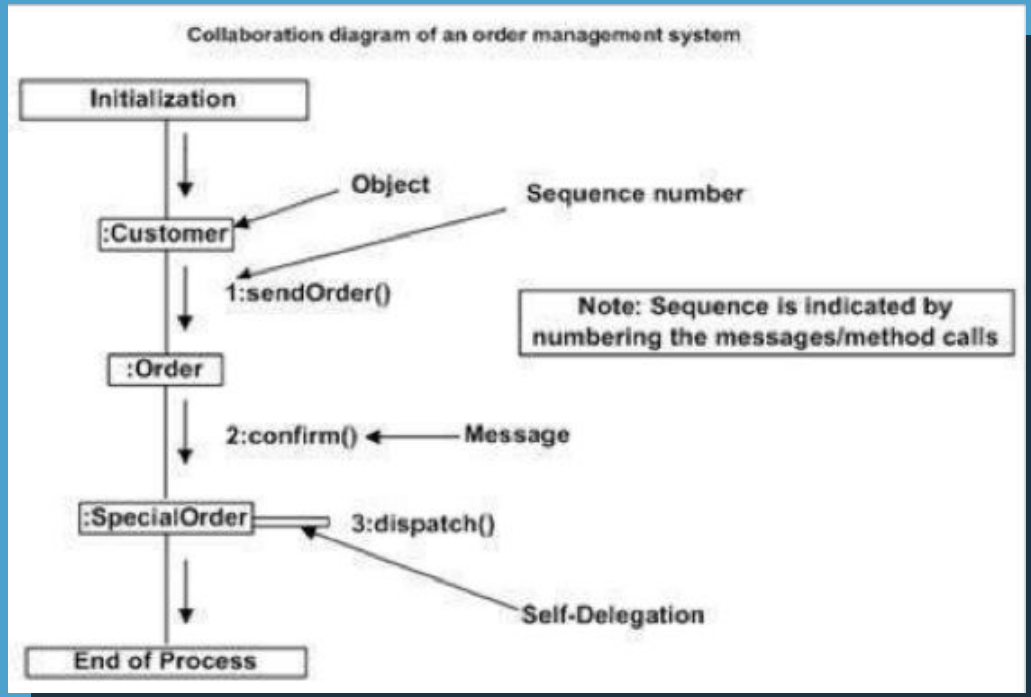
- Order in which messages occur
- What messages are sent between a system's objects



Collaboration Diagram

The behaviour of objects in a use case by describing the objects and the messages they pass.

- Order in which messages occur
- What messages are sent between a system's objects



Bug Tracking Report

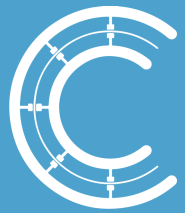
A Bug Tracking Report is a record of all the bugs that occur in the process of building a Software Product.

For the PDA you must include 5-6 examples of “bugs” or errors.

Bug/Error	Solution	Date

Remember!

- DO NOT GOOGLE PDA DIAGRAMS
- Use the resources provided
- Keep on top of the PDA as you go through the course



Thanks_