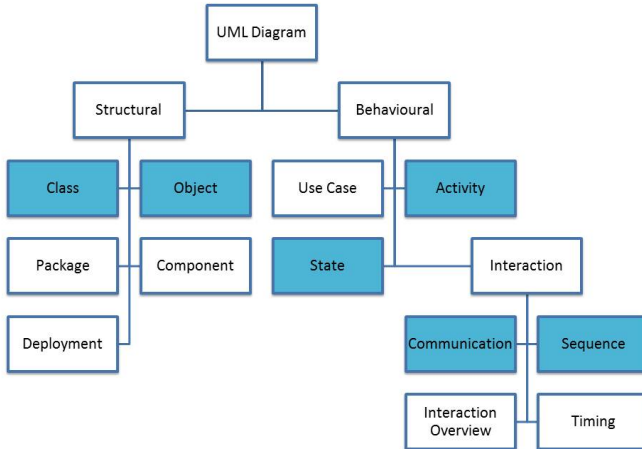


UML Diagrams

Activity Diagram

University of Pretoria

4 September 2023



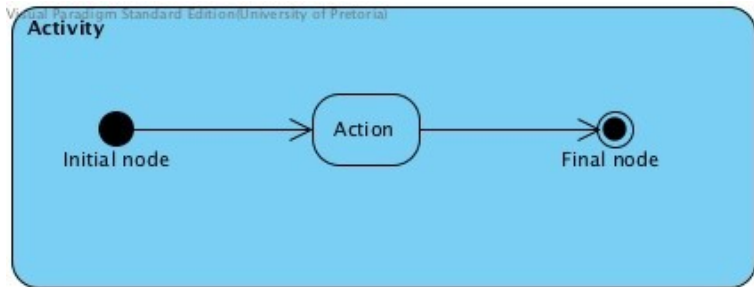
Activity Diagrams:

- are often used to model business processes.
- model complex workflows by operations on objects.
- describe what actions need to take place and when they should occur.
- describe how activities are coordinated to provide a service.

Difference between state diagrams and activity diagram

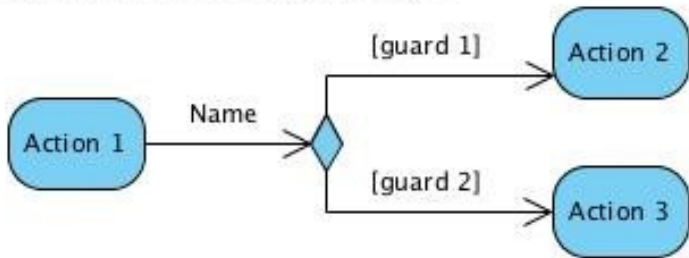
- **State diagrams** are used to model state-dependent behaviour and conditions for transitions between states
- **Activity diagrams** are used to model the flow of actions and the order in which the actions take place.

Start, action and end nodes

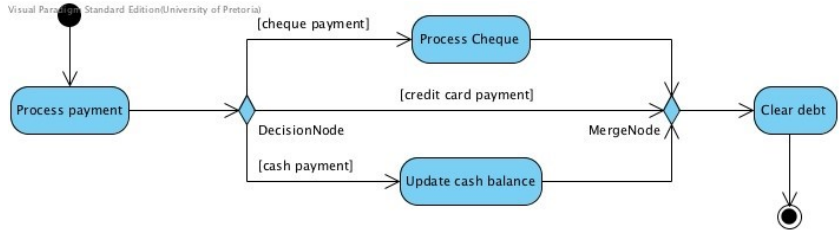


Activity edge and [guard condition]

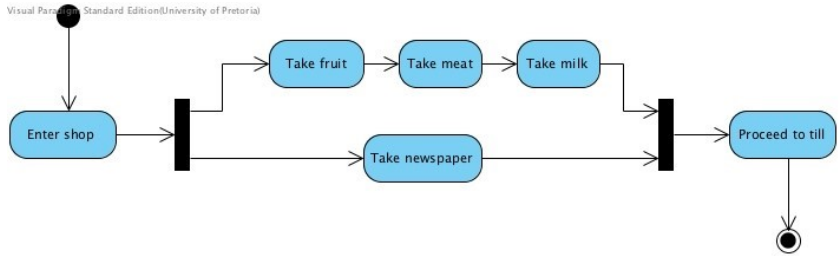
Visual Paradigm Standard Edition(University of Pretoria)



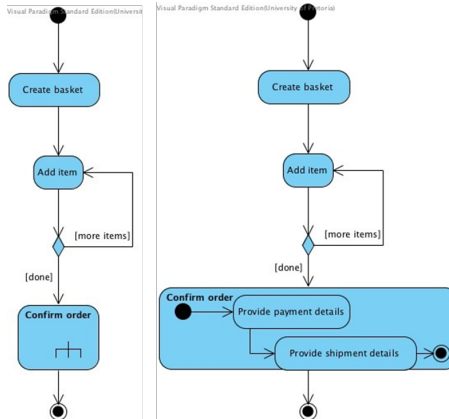
Alternate flows: Model of a payment showing the use of decision and merge nodes



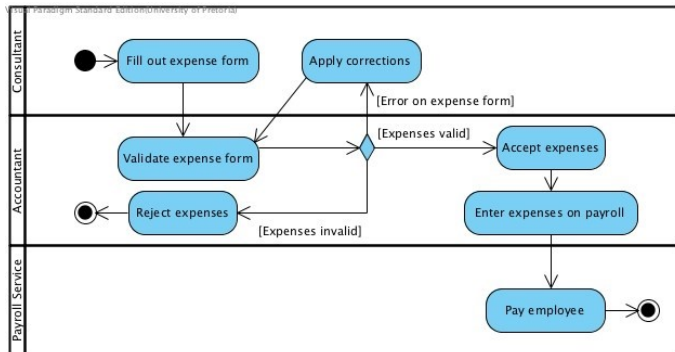
Parallel flows: Shopping experience by a married couple



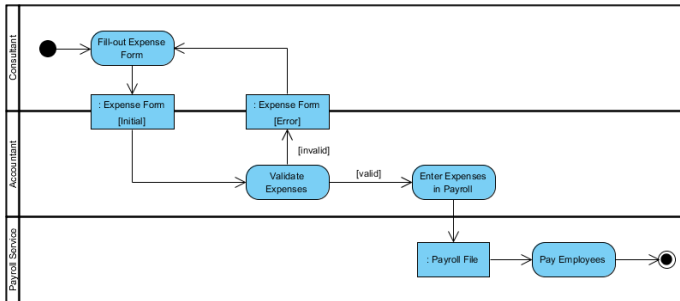
Composite activities



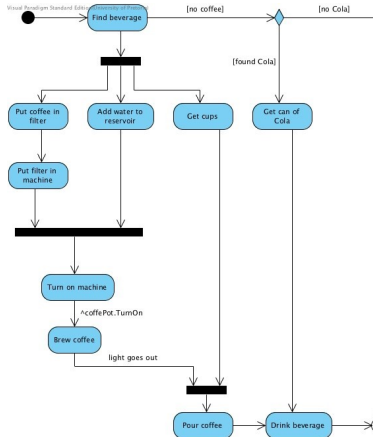
Swimlanes are used to convey which class is responsible for a given activity



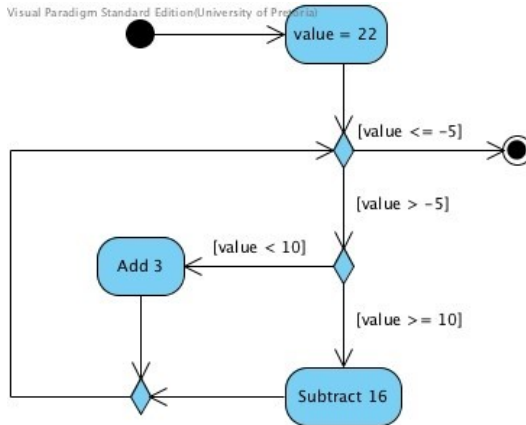
Swimlanes showing the objects involved in the set object flows.



Example of finding and drinking a beverage



An activity diagram containing a loop



Implementing code for an activity diagram

Instructions:

- Consider the code
- Translate the code into an activity diagram