



Activity Diagram

They are typically used for:

- (1) Modeling business processes
- (2) Model the logic of a use case or scenario
- (3) Model the detailed logic of a business rule



Activity Diagram

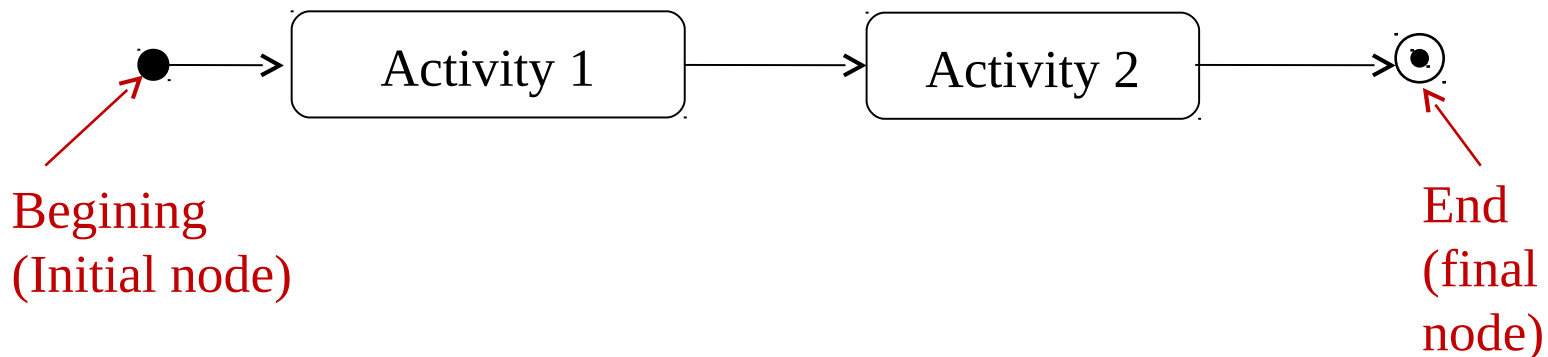
In case of use case logic modeling or scenario (2) Activity diagrams are usually created from the descriptions of the use cases and respective scenario.

Suitable for the modeling of the functional vision of a system, because they allow to describe the logic of its processes or its functions



Activity Diagram

They describe the internal behavior of these processes or functions.
They represent a series of actions and / or activities and explaining the dependencies between them





Elements of Activity Diagrams

- Activity is a step of a process where some work is done (calculation, manipulation, research, etc.)
 - » Sequential activities - an activity can only be performed when all the activities that depend on it have already been performed.
 - » Competitive activities - activities can be performed in parallel.

Insert Order



Elements of Activity Diagrams

Edges, represented by arrows, connect the individual components of activity diagrams and illustrate the control flow of the activity





Elements of Activity Diagrams

- Swimlanes
- The individual elements of an activity diagram can be divided into individual areas or 'partitions'.
- Various criteria can lead to the creation of these partitions: organization entities, cost centers, locations, etc:

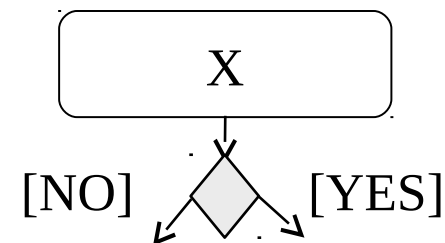
Elements of Activity Diagrams

- Decision nodes :
 - » is a control node that accepts tokens on one or two incoming edges and selects one outgoing edge from one or more outgoing flows.

Decision nodes were introduced in UML to support conditionals in activities.

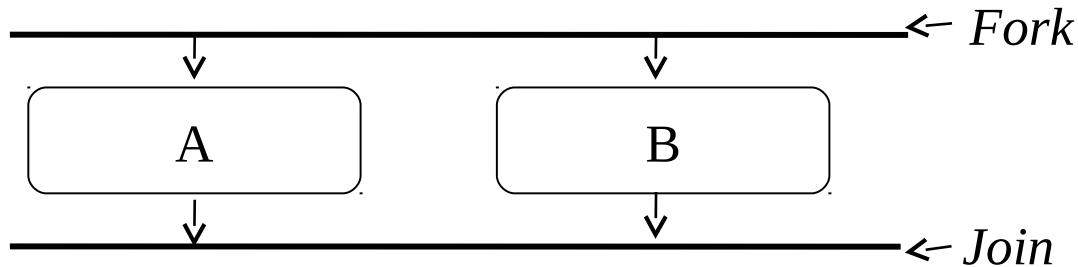
The notation for a decision node is a diamond-shaped symbol.

Which of the edges is actually traversed depends on the evaluation of the **guards** on the outgoing edges.



Elements of Activity Diagrams

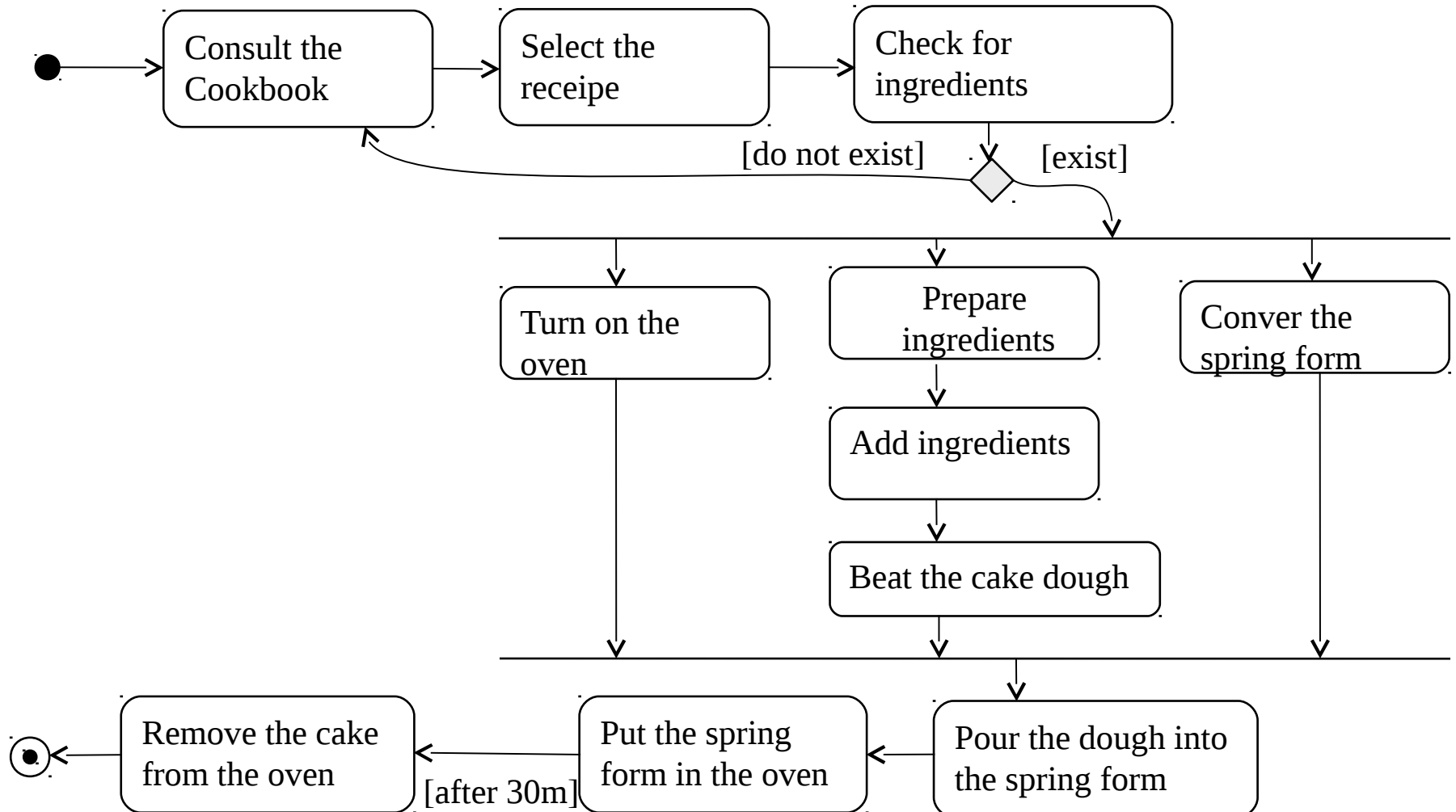
- *Fork node and join node*: describe a set of activities that should be performed, but where the order of execution is not relevant





Example 1

Use Case: Bake a cake





Observations

Create a Use Case diagram for the entire project
Create an activity diagram for each use case



Bibliography

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