

# Activity Diagrams

PB007 Software Engineering I

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**Activity Diagrams** represent the flow of all the steps of an activity. They consist of different types of nodes that are connected with directed edges.

The **Activities** most often represent

- use cases
- operations and methods
- algorithms
- business processes



# Basic Elements



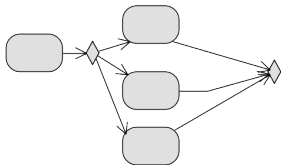
Action Node



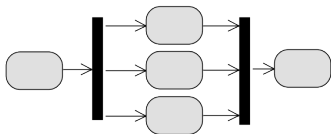
Initial Node



Final Node

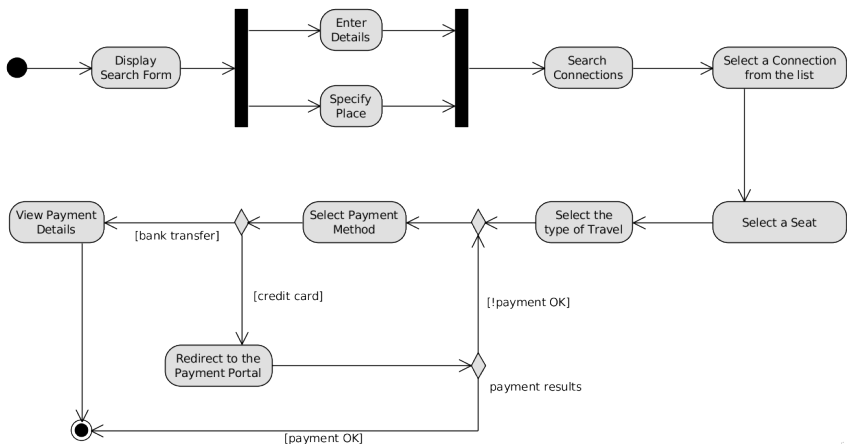


Decision Node



Fork/Join Nodes

# Activity Diagram - example



**Activity partitioning / Swimlanes** represent a logical grouping of related actions (actors, use cases, ...). In our case they will typically represent different use cases using the relationship `include` or `extend`.

`include`

- Basic and embedded use cases have their own swimlane.

`extend`

- If the extension point is in *Action1* and *Action2* is an extends use case, then a decision node is inserted after *Action1* from which the flow will go to *Action2*. After its completion, the flow will go back to *Action2*. Each use case may be in its own swimlane.



- <http://sourcemaking.com/uml/modeling-business-systems/external-view/activity-diagrams>
- [http://sce.uhcl.edu/helm/rationalunifiedprocess/process/modguide/md\\_bactd.htm](http://sce.uhcl.edu/helm/rationalunifiedprocess/process/modguide/md_bactd.htm)



- Adjust the result of the previous exercise according to the comments and feedback from the instructor. Focus on the revision of the text specification to complete the three use cases from previous sessions;
- Select other 1-2 use cases and document them by means of the activity diagrams, possibly different from those that you used for the specification. The selection must again be approved by the instructor;
- Try to understand in the same way the remaining use cases, to be able to at least verbally describe their event streams;
- Upload the **pdf report** to the folder (**Week 04**).  
**Deadline:** Friday 21.10 23:59



# Reporting configuration

