

Answers for Tutorial #2

IS2102: Requirements Analysis and Design

Kamilul Ashraf Kamsani
National University of Singapore
kamilul@comp.nus.edu.sg

1. What are the phases in most SDLCs?

Answers:

- Initiation during which a business case is made for the project (includes Business Modeling discipline)
- Discovery during which the eliciting, analysis, and documentation of detailed requirements peaks.
- Construction during which the IT solution (or Information System) is built (includes Design, Implementation, Testing disciplines)
- Final Verification and Validation (includes Testing discipline)
- Closeout (includes Deployment discipline)

2. What are the objectives of the initiation phase?

Answers:

- To develop the business case for the project
- To establish project and product scope
- To explore solutions, including the preliminary architecture

3. What are the deliverables of the initiation phase?

Answers:

- A single document: Business Requirements Document (BRD) to describe business requirements
- The BRD will be revised as the project progresses
- Key components of the BRD produced during the Initiation phase include
 - Business use-case descriptions include business use-case diagrams
 - Role map
 - System use-case diagram
 - Initial class diagram describing key business classes

4. What are the elements of an activity diagram?

Answers:

- **Initial node:** indicates where the workflow begins
- **Activity:** indicates a step in the process. Notice anything about the typical naming convention?
- **Control flow:** an arrow showing the direction of the workflow
- **Decision:** a diamond symbol, indicating a possibility of different paths
- **Guard condition:** a condition attached to a control flow. A guard is shown within square brackets
- **Merge:** model a number of alternative flows that lead to the same activity
- **Event:** a trigger attached to a control flow and is indicated without the use of square brackets
- **Final node:** indicates the end of the process
- **Fork and Join:** bars used to document parallel activities.
 - A **fork** indicates the point after which a number of activities may begin in any order.
 - A **join** indicates that workflow may commence only once the parallel activities that flow into it have all been completed.

5. What are some of the modeling elements in business use-case diagram?

Answers:

- **Business actor:** someone external to the business
- **Worker:** someone who works within the business
- **Association:** indicates that the actor interacts with the business over the course of the business use case

6. What is the purpose of an activity diagram and what is the difference between an activity and an action?

Answers:

- An activity diagram models the work flow of each business use case
- An action is a simple, nondecomposable piece of behavior, while an activity is used to represent a set of actors.

7. What is meant by polymorphism when applied to object oriented systems?

Answers:

The polymorphic methods in the classes can have many different implementations according to number of parameters or the subclasses implementing the abstract methods.

8. What techniques are used by analysts when they need to guide users in explaining what is wanted from a system?

Answers:

- Interviews (Top-down or Bottom-up)
- Joint Application Development (JAD)
- Questionnaires

Disclaimer: These answers are not necessarily correct, infact they might be wrong! (because I blindly copied it from the slides) Hence, I'd be happy if you are willing to share your answers to correct the ones above. Email me at kamilul@comp.nus.edu.sg!