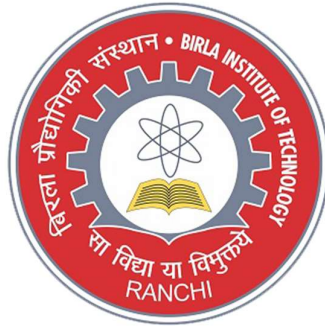


Birla Institute of Technology, Mesra,
Patna Campus



SE-Assignment

Name-Shubham Sourabh

Roll-Btech/15044/18

Sec-CSE 6th

#Assignment-1

1) What do you understand by UML?

ANS:- UML stands for the Unified Modelling Language and it is also a graphical language for visualization, construction and documenting for the artifacts of any of the system.

The blueprints for various aspects before the actual physical implementation of the system occur can be efficiently created.

The UML is a very important part of developing object oriented software and the software development process.

2) What do you understand by relationships in UML?

ANS:- There are basically three different kinds of relationships which are -

Dependencies- They are the relationship between two different entities. If any single entity is changed then the impact would be laid on the other too. It also depicts that one class use another class as an argument in the signature of the operation. Dependency is used to describe the relationship between various elements in UML that are dependent upon each other.

Generalization-

i.) In this relationship, the specified class and subclass ratio is evaluated. It also depicts that one entity inherits the properties of the other entity.

ii.) It is also called a parent-child relationship. In generalization, one element is a specialization of another general component. It may be substituted for it. It is mostly used to represent inheritance.

Association-

i.) Association is a structural relationship between two different objects. It is a set of links that connects elements of the UML model.

ii.) It also defines how many objects are taking part in that relation.

3) What are the different parts of a deployment diagram in UML?

ANS:- The deployment diagram consists of the –

Nodes

Components

Dependencies

Links

4.) What are static diagrams in UML?

ANS:- Static diagrams are also known as the structural diagrams. They are known by the following names-

Class diagram

Object diagram

Component diagram

Deployment diagram.

5) What are the messages and dynamic diagrams in UML?

ANS:- Messages are the specifications for any sort of communication. When a message is passed then the estimated action is expected which is basically a statement for the execution that held prior. Dynamic diagrams are also called the behavioral diagrams. The names of few of the dynamic diagrams are:

Use case diagram

Sequence diagram

Collaboration diagram

Activity diagram

Statechart diagram.

6.) Can you name the types of modelling?

ANS:- There are basically three types of modeling used

Architectural modeling

Behavioral modeling

Structural Modeling.

7) What are the different views that have to be considered before the build up of an object oriented software system?

ANS:- Before the actual building up of an object-oriented software system, there are generally 5 views-

Use case view- it exposes the requirements of any system.

Design view- it captures the vocabulary of the system.

Process view- this view models the distribution across the system.

Implementation view- this view addresses the implementation of the system.

Deployment view- this view focuses over the components which are required for the deployment of the system.

8) Can you tell us a few advantages of creating a model?

ANS:- There are a number of advantages for creating any model like:

They help to document the entire system.

They help to make templates for the construction in the system.

They help in the visualization of the system.

The structural dimensions of a system can be specified.

Modeling is entirely accepted by the engineering technique.

9) What are the modelling diagrams that are most commonly used?

ANS:- The most frequently used modeling diagrams are 9 in number. These are as:

Use case diagram

Class diagram

Object diagram

Sequence diagram

State chart diagram

Collaboration diagram

Activity diagram

Component diagram

Deployment diagram

10) Can you give us a brief defining the architecture?

ANS:- Architecture means with the structural and behavioral aspects of the entire software system. It significantly monitors over the software usage and the functionality evolving around it. With architecture, the entire performance is economical and all the technical constants can be well managed.

11) What do you understand by SDLC and name its processes?

ANS:- SDLC stands for the software development life cycle and it is an amalgamation of the number of processes. This entire life cycle is divided into several phases. The major of them are:

Use case driven

Architecture-centric

Iterative

Incremental

12) Can you name the different elements with the collaboration diagram?

ANS:- There are basically three types of elements of a collaborative diagram:

Object - the interaction in a system always takes place between two objects. An object is always depicted by a rectangle with the name of the object. This is preceded by a colon and an underline.

Relation - it is also known as an association which is always among the objects which are linked with the connection in a system. They are depicted by placing the qualifiers on both ends.

Message - An instance of communication from one point to the other significant point or destination is a message. It always depicts the interaction that is offering between the objects in a system. The sequence of this interaction is directly shown by the number.

13) What are the elements which are used in activity diagrams?

ANS:- The significant elements which are used in activity diagrams are:

Activities - it indicates the action which has to be performed or had been performed in the system.

Transitions - they are represented by an arrow and used to indicate the flow that is occurring among the elements in the diagram.

Decision points - in the system the logical branching is highlighted by the decision points.

States - these are indicated in order to mention the milestones for the processing of activity diagrams and is shown by a rounded rectangle.

14) Tell us the difference between activity and sequence diagrams?

ANS:- Sequence diagrams basically show the way of processing or the execution of the process with any of the sequence. Sequence diagrams are entirely focused on the representative interaction among different objects.

On the other hand, activity diagrams actually depict the following phases-

Depicts the operational workflow in a system.

Shows the actions and sequences for a number of objects.

15) Name some of the roles that are played by the packages, modules and wrappers?

ANS:- Modules are known as component diagrams which include the physical computers as a node and display the different packages inside it is a component.

Packages are used to organize the different classes, all at one place.

Wrappers are collectively used to constitute the multiple packages which include the content from it.

16) What are the elements which are utilized in the state chart diagram?

ANS:- The elements which are in the state chart diagram are:

Initial state

State

Transition

Event and action

Final state