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BANGLADESH UNIVERSITY OF BUSINESS AND TECHNOLOGY

Lab Assignment-1

Course Code: CSE 318

Course Title: System Analysis and Design

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1 NO Ans

Soln: Identifying actons is on of the finst steps in use case analysis. Each type of external entities with which the ~~acton~~ system must interact is nepnesented by an acton.

A acton in a use case diagnam is any entity that perfonms a nole in one given system. This could be a person, onganization on an external system and usually dnawn like a skeleton shown below:

An acton has some chanacteristics as follows:

1) An acton ~~models~~ models a type of nole played by an entity that interacts with the subject (e.g. by exchanging signals and data) but which is external to the subject.

2) Actons do not necessanily nepnesent specific physical entities but merely particular ~~fact~~ facets (i.e. noLes) of some entities that are nelevent to the specification of its associated use cases.

3) A single physical instance may play the nole of several

different actors and a given actor maybe played by multiple different instances.

4) Actors may represent roles played by human users, external hardware or other subjects.

2 NO Ans

Soln: A use case diagram is a way to summarize details of a system and the users within the system. It is generally shown as a graphic depiction of interaction among different elements in a system. The three things ~~must be~~ a use case always describe are:

1) An actor that initiates an event.

2) ~~An~~ The event that triggers a use case.

3) The use case that performs the action triggered by the event.

3 NO Ans:

Soln: An activity diagram visually presents a series of actions or flow of control in a system ~~is~~ similar to a flowchart or a dataflow diagram. Activity diagrams are often used in business process modeling. They can also describe the steps in a use case diagram. Activities modeled can be sequential and concurrent. In both cases an activity diagram will have a beginning (an initial state) and an end (a final state). Activity diagrams are ideal for describing the following ~~Process~~ processes:

- Use cases and the steps described in them.
- Business process or workflows among users and systems.
- Software protocol, i.e. the permissible sequence on interactions between components.
- Software algorithms.

Even the most complex progressions can be visualized by activity diagrams.

4 NO Ans:

Soln: Swimlane is a rectangle symbol used to indicate which type of activity activities is performed on which platform. The platform includes servers, web browsers, mainframe computers etc. ~~In~~ in order to represent the activities done by the users. Swimlanes are used to show which activities are performed by which organization in the activity ~~diagram~~ diagram. The lanes are boundaries are drawn and the activities of a particular organization are drawn in the same lane as that of the organization. Swimlanes have to be ordered in a logical Manner. It is suggested to have less ~~then~~ than five swimlanes in an activity diagram. Swimlanes are good in that they combine the activity diagram's ~~depe~~ depiction of logic with the interaction diagram's depiction of responsibility.

5 NO Ans:

Soln: Sequence diagrams illustrate a succession of interactions between classes or object instances over time. Sequence diagrams are used to show the overall pattern of the activities or instances in a use case.

communication diagrams describe the interactions of two or more things in the system that perform a behavior that is more than any one of the things can do alone.

A communication diagram emphasizes the organization of objects, whereas a sequence diagram emphasizes the time ordering of messages.