Name : Shahid Ali

Id : 13942

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Submitted To : Mrs. Aasma Khan

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Question No : 01

MCQs

1: UML activity diagrams are useful in representing which analysis model elements?

Ans: (d) scenario based elements

2: Unified Modeling Language (UML) is a graphical language for

Ans: (d) both a and b

3: To support this modules this view which UML diagrams are used?

Ans: (c) both a and b

4: Which of the following are the design concerns is design models?

Ans: (d) a,b and c

5: Which of these are characteristics of a good design?

Ans: (d) b and c

6: Which of the following is used to represent the architectural design of a software ?

Ans: (d) All of above

7: Since modularity is an important design goal it is not possible to have too many modules in a proposed design

Ans: (b) False

8: All architecture is design, not all design is architecture

Ans: (a) true

9: Reusability of software modules refers to

Ans: (b) that is components can be easily reused in the development of other software systems

10: Cohesions is a qualitative indication of the degree to which a module can be written more compacity

Ans: (b) focuses on just one thing

11: Coupling is a qualitative indication of the degree to which a module

Ans: (d) measures the interconnection among modules in a software structure

12: Information hiding is a qualitative indication of the degree to which a module

Ans: (c) is inaccessible to other modules

13: Data oriented design is useful for systems that

Ans: (a) process lots of data

14: Formal methods are useful for systems that

Ans: (d) uses mathematical notation

15: Component based methods are useful for systems that

Ans: (c) is used for the large systems that can be modularized

Question No : 02

Case Study: Fire Alarm

The owner of a large multi-stored building wants to have a computerized fire alarm system for his building. Smoke detectors and fire alarms would be placed in each room of the building. The fire alarm system would monitor the status of these smoke detectors. Whenever a fire condition is reported by any of the smoke detectors, the fire alarm system should

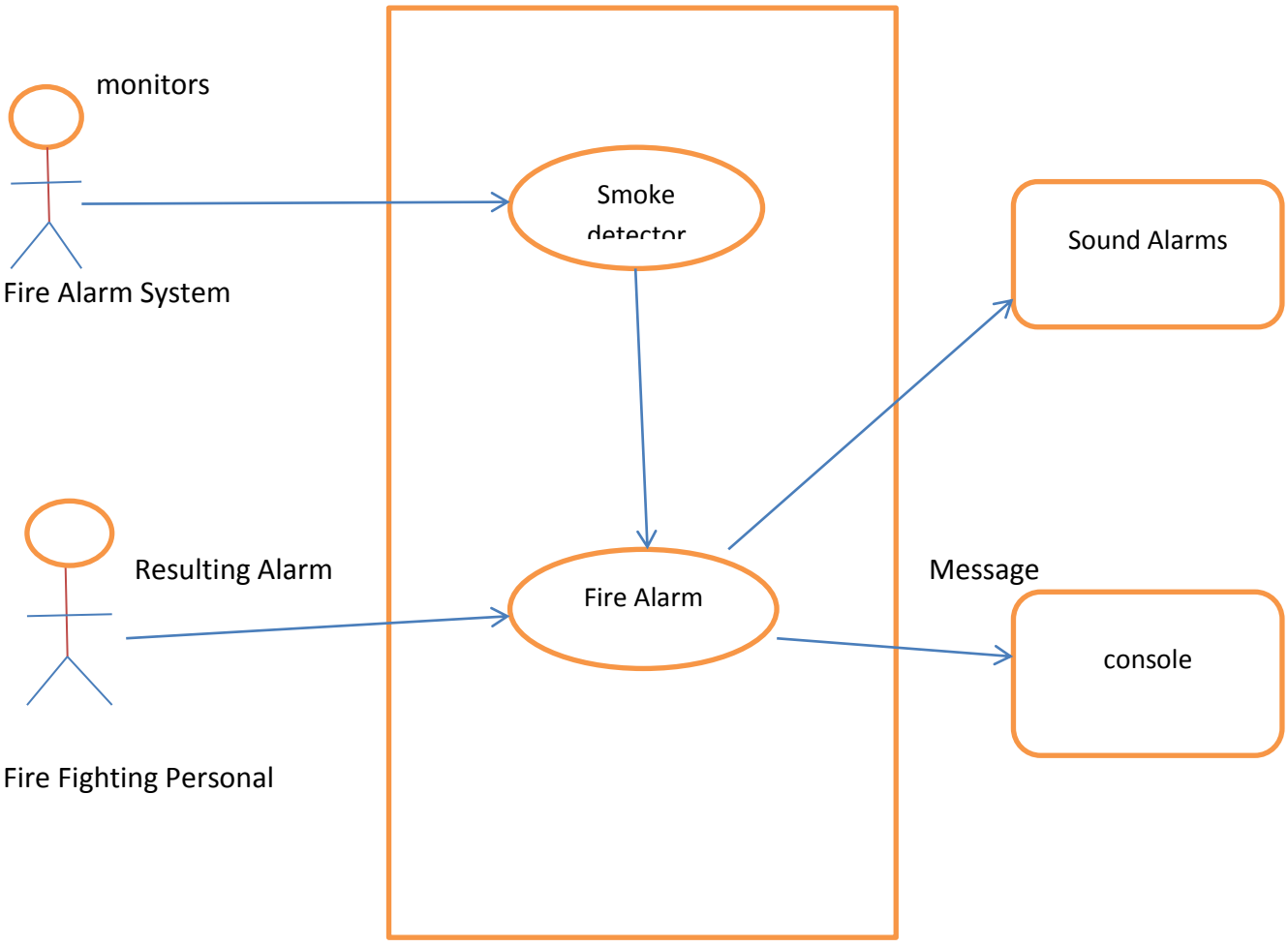
determine the location at which the fire condition is reported by any of the smoke detectors, the fire alarm system should determine the location at which the fire condition has occurred and then sound the alarms only in the neighbouring locations. The fire alarm system should also flash an alarm message on the computer console. Fire fighting personnel man the console round the clock. After a fire condition has been successfully handled, the fire alarm system should support resetting the alarms by the fire fighting personnel.

a) Identify the functionalities of above fire alarm system.

Ans: The above fire alarm system are used to monitor status of the smoke detector placed in each room of the building and also determine the location at which the fire condition has occurred and itflash an alarm message on the computer consolve. It support resting the alarm by the fire fighting personnel.

b) Describe how the user employs the system and how the system provides services to the users i.e. give a scenario view using use case diagram.

Ans: **FIRE ALARM SYSTEM**



c) Give a process view of the above scenario using an activity diagram.

Ans :

ACTIVITY DIAGRAM