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14259

Mid Term Assignment

Course: Software Requirement and Specification

Date: April 13, 2020

Question No: 01

MCQs

- 1. Which of the following is correct for the types of requirements?**
 - A. Reliability
 - B. Availability
 - C. Usability
 - D. All of the above**
- 2. Select the developer-specific requirement?**
 - A. Availability
 - B. Portability
 - C. Usability
 - D. Maintainability
 - E. Both B & D**
- 3. The following is not a step of requirement engineering?**
 - A. design**
 - B. elicitation
 - C. documentation
 - D. analysis
- 4. Symbolic representation of QFD is...**
 - A. quality function development
 - B. quality function deployment**
 - C. quality function design
 - D. none of the mentioned
- 5. What are the system requirement of the documents..?**
 - A. SRS**
 - B. SDD
 - C. SRD
 - D. DDD
- 6. The most important stakeholder is_____:**
 - A. Middle-level stakeholder
 - B. Entry level personnel
 - C. Users of the software**
 - D. Managers
- 7. Which of these steps is includes in the Requirement engineering process...**
 - A. Requirement Gathering

B. Feasibility study

C. Validation

D. Both A & B

8. In the elicitation process, the developers discuss with the client and end users and know their expectations for the software.

A. Organizing requirements

B. Requirement gathering

C. Negotiation & discussion

D. Documentation

9. The process to gather the software requirements from the client, analyze and document them is known as.....

A. Software system analyst

B. User interface requirements

C. Requirement elicitation process

D. Requirement engineering process

10. The interviews held between two persons across the table is..

A. Written

B. Non-structured

C. One-to-one

D. Group

11. The computer-based system can have a profound effect on the design that is chosen and also the implementation approach will be applied.

A. Behavioural elements

B. Flow-oriented elements

C. Scenario-based elements

D. Class-based elements

12. Information systems is concerned with..

A. Systems where software is used as a controller in some broader hardware system

B. Processing information which is held in some database.

C. Combination of A and B

D. None

13. Embedded systems is concerned with..

A. Systems where software is used as a controller in some broader hardware system

B. Processing information which is held in some database.

C. Combination of A and B

D. None

14. Command and control systems is concerned with..

A. Systems where software is used as a controller in some broader hardware system

B. Processing information which is held in some database.

C. Combination of A and B

D. None

15. The requirements document describes:

- A. The services and functions which the system should provide
- B. The constraints under which the system must operate
- C. Overall properties of the system i.e.. constraints on the system's emergent properties
- D. All of the above

Question No: 02

(5)

State what the project you have selected for your SRS document is required to do and the constraints under which it is required to operate

Answer No: 02

The project I have selected for SRS document is **RAILWAY RESERVATION SYSTEM**. The purpose of this source is to describe the railway reservation system, which provides the train timing details, reservation, billing and cancellation on various types of reservation namely. In addition, This Railway reservation service will not only enhance the reservation but will also help the commuters in getting support, refunds and other real time fixes.

Constraints:

Following are the constraint under which it required to done it task.

- Confirm Reservation for confirm Seat.
- Reservation against Cancellation.
- Waiting list Reservation.
- Online Reservation.
- Tatkal Reservation

Question No: 03

(10)

With respect to the project you have selected for your SRS document, write a two to three (2-3) page paper in which you:

1. Create a Software Requirement Specification (SRS) that includes the following:

- A. A detailed description of both user and system requirements. At least four (4) user requirements and four (4) system requirements should be provided.**
- B. A detailed description of both functional and non-functional requirements. At least four (4) functional requirements and four (4) non-functional requirements should be provided.**

Answer No: 03

Introduction

- **PURPOSE**

The purpose of this source is to describe the railway reservation system, which provides the train timing details, reservation, billing and cancellation on various types of reservation namely. In addition, This Railway reservation service will not only enhance the reservation but will also help the commuters in getting support, refunds and other real time fixes.

1. Confirm Reservation for confirm Seat.
2. Reservation against Cancellation.
3. Waiting list Reservation.
4. Online Reservation.
5. PNR Generation

➤ **SCOPE**

Technology has transformed many aspects of life in the 21st century, including the way many of us make train reservations. For example, to make ticketing more convenient for travelers, an online reservation system helps us in booking tickets from the comfort of our homes or offices.

The various advantages of using the online reservation system are as follows:

- Convenient – You can book or cancel your tickets sitting in the comfort of your home or office.
- Saves Time and Effort - You can save the time needed to travel to the railway reservation office and waiting in the queue for your turn.
- Towards a greener planet – Instead of printing your ticket you can also choose to travel with the soft copy of your booked ticket in your laptop or even on your mobiles
- Freight revenue enhanced
- Passenger revenue enhanced
- Improved & optimized service

System Requirement

➤ **Search**

This function allows the user to search for train that is available between two travel cities namely “Departure City” and “Arrival City” as desired by the traveler. The System initially prompts the agent for these two column values, the date of the journey, preferred time slot and the number of passengers. It then displays a list of trains available with different classes.

➤ **Selection:**

The function allows a particular train to be selected from the displayed list. All the details of the train are as shown:

- Train Number.
- Date, Time and place of departure.
- Train Duration
- Fair per head
- Number of stoppages – 0, 1, 2...

➤ **Review:**

if the seats are available, the software prompts for the booking of train. The train information is shown, the total fare including taxes is shown and train details are reviewed before final payment

➤ **Travel Information:**

This system asks for details of all the passenger before the booking confirmation. Hence, lesser cases of seat issues.

➤ **Payment:**

It requires details of credit/ debit card of the person to make payment and reserve the required seat, Details such as:

- Card Number
- Card Type
- CVV Number
- Expiry Date
- Name on card

➤ **Cancellation:**

System also allow cancellation of existing reservation done, making seats unreserved for others to book and refunding the money back to the accounts of users cancelling the tickets.

Functional requirement

➤ **TRAIN DETAILS**

Customers may view the train timing at a date their name and number of tickets.

➤ **RESERVATION:**

After checking the number of seats available the customers reserve the tickets.

➤ **BILLING:**

After reserving the required amount of tickets, the customers paid the amount.

➤ **CANCELLATION:**

If the customers want to cancel the tickets, then half of the amount paid by the customers will be refunded.

Non functional requirement

➤ **Performance**

This system helps in increasing the overall performance of the Railway Reservation functionality by shifting a large chunk of load online causing in less hassle in ticket booking, cancellation or querying. This System is 22hours Live per day giving us greater availability time as compared to that of 9 hours offline activity.

➤ **Reliability**

The Reliability of the overall project depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes. Also, the system will be functioning inside a container. Thus, the overall stability of the system depends on the stability of container and its underlying operating system.

➤ **Availability**

The system should be available at all times, meaning the user can access it using a web browser, only restricted by the down time of the server on which the system runs. A customer friendly system which is in access of people around the world should work 24 hours. In case of a hardware failure or database corruption, a replacement page will be shown. Also, in case of hardware failure or database corruption, backup of the database should be retrieved from the server and saved by the Organizer. Then the service will be restarted. It means 24x7 availability.

➤ **Security**

This system should work under 3-Level Architecture combining DB-Class-Front end with different security facilities and encryption. The System use SSL in all transactions that include any confidential customer information. The system must automatically log out all customer after a period of inactivity of those users respectively. The system should not leave any cookies on the customer’s computer containing the user’s password. The system’s back-end servers shall only be accessible to authenticated management.

➤ **Maintainability**

A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the project will be done. Also the software design is being done with modularity in mind so that maintainability can be done efficiently.

➤ **Supportability**

The code and supporting modules of the system will be well documented and easy to understand. Online user Documentation and Help system requirements

2. Develop a use case diagram to summarize the functional requirements of the system through the use of Microsoft Visio or its open source alternative.



