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SUBJECT: **Software Requirement Specification**
SEM & COURSE: 5ᵗʰ – BS (SE)

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Question No: 01

1. **Which of the following is correct for the types of requirements?**
   D. All of the above
2. **2. Select the developer-specific requirement?**
   E. Both B & D
3. **The following is not a step of requirement engineering?**
   A. Design

4. **Symbolic representation of QFD is**…

   B. quality function deployment

5. **What are the system requirement of the documents..?**
   A. SRS

6. **The most important stakeholder is_____:**
   C. Users of the software

7. **Which of these steps is includes in the Requirement engineering process…**
   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.**
   B. Requirement gathering

9. **The process to gather the software requirements from the client, analyze and document them is known as…..**
   D. Requirement engineering process

10. **The interviews held between two persons across the table is**..
    C. One-to-one

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

12. **Information systems is concerned with..**

    B. Processing information which is held in some database.

13. **Embedded systems is concerned with..**

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

14. **Command and control systems is concerned with..**

    C. Combination of A and B

15. **The requirements document describes:**

    D. All of the above

Question No: 02

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:

I have selected the project of Hand Gestures. Main work of this Project is to give ease to a user by giving direction through hands and not by mouse or keyboard. It will also give a user to access the computer media (controlling audio, videos and images) and can also be use for the entertainment for a user by playing certain games by just hands directions and can scroll a web page in up and down manner.

In the project, a user will implement a simple Arduino based hand gesture control where he can control functions of a simple game like moving, jumping etc. The user will also control certain functions of a computer like play/pause a video, move left/right in a photo slide show, scroll up/down in a web page and many more.

Constraints

- A user cannot copy, cut or paste
- A user cannot play all the Games
- A user has to maintain a certain length through which Arduino sensor could work
- A user could not type through Arduino sensor

Question No: 03

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

Answer

User Requirements

The User Requirements describes the business needs for what users require from the system. User Requirements are written early in the validation process, typically before the system is created. They are written by the system owner and end-users, with input from Quality Assurance. Requirements outlined in the URS are usually tested in the Performance Qualification or User Acceptance Testing. User Requirements are not intended to be a technical document, readers with only a general knowledge of the system should be able to understand the requirements outlined in the URS**.**

The User requirements are as follow;

- Media Access Control
- Playing Games
- Hand Directions
- Replacement of Mouse and Keyboard (in certain points)

System Requirements

System requirements are the required specifications a device must have in order to use certain hardware or software. For example, a computer may require a specific I/O port to work with a peripheral device. A Smartphone may need a specific operating system to run a particular app.

The System requirements are as follow;

- Coding
- Controlling Sensitivity
- Analog Input Pins
- Input Voltage Pin
- Input/output Pins

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

Functional Requirements

- 90% of the operations shall be processed in less than 15s.
- There should be 2 programmes which are verifying at the same time.

Static numerical requirements:

- The number of terminals to supported : 1
- The number of simultaneous users : 1
- There are more than 1 programme to be handled.

The Functional Requirements are as follow;

- Forward/Rewind Videos
- Volume High/Low
- Scroll Images
- Scroll WebPages Right/Left
- Play Sensor Related Games

Non-Functional Requirements

The software developed here assumes the use of a tool such as USB for connection between the card STM32 and the environment Arduino. The environment Arduino will run on the editor's PC and will contain a library of STM32 which is already added into this software.

The Non-Functional Requirements are as follow;

- Running Code
- Sensitivity

- Placement of the Sensor
- Connecting wires of Input/Output and Voltage wires

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.