SE 2001: Software Requirements Engineering (A)

Quiz 6

Time: 20 minutes   Max Marks: 20   Roll No. ___Solution_____

Q1.   **10 Marks**

Consider the following requirements:
1. SmartHome shall have a reverse osmosis water purification system
2. System shall handle providing water for pets
    2.1. Pet watering bowls shall be tied into water filtration system [ref. Req 1]
3. SmartHome shall provide users a recipe center using which the users can enter recipes into the system
    3.1. System shall provide interface to the available food stock in the inventory using the information available through the tracking available through Req 4.2
4. SmartHome shall allow the users to control and view inventory
    4.1. System shall provide interface for recipe center [ref. Req 3] to provide feedback on stock of items needed for recipe
    4.2. System shall monitor and track the usage of inventory items involved in a an entered recipe [ref. Req 3]
    4.3. System shall present reports to users of food inventory using the monitoring and tracking mentioned in Req 4.2
5. System shall monitor airflow in various rooms within the home

To do:
Draw a complete requirements traceability matrix for the above requirements and fill the matrix with the letters U or R where U depicts 'uses' relationship and R depicts 'refers to' relationship.

	R1	R 2.1	R 3	R 3.1	R 4.1	R 4.2	R 4.3	R 5
R 1								
R 2.1	R							
R 3								
R 3.1						U		
R 4.1			R					
R 4.2			R					
R 4.3						U		
R 5								

Q2.   **10 Marks**

Consider the requirements mentioned in Question 1. Suppose you are the customer of the smart home. The requirements engineer wants you to prioritize the requirements so that he can proceed with the project. You tell the engineer that you have taken an RE course at FAST and know the requirements prioritization techniques very well. The engineer feels good and considers your knowledge a great help. The engineer then asks you to use 100-Dollar Test (aka Cumulative Voting) technique to prioritize these requirements and does not give you any other details.

To do:
Use the 100-Dollar Test technique and prioritize the requirements mentioned in Question 1. You have 100 dollars with you to start the prioritization process. Note that all the dollars allocated to a decomposed requirement must be distributed to the sub requirements. Failure to this distribution will results in deduction of marks.

There is no single most appropriate solution to this question. The following guidelines shall be used for grading.

Guidelines:

Check if the students divide 100 dollars to all requirements. They cannot spend more or less. These 100 dollars shall be mutually divided among the requirements. All dollars allocated to requirements 2 and 4 should be divided into their respective sub-requirements.