Stamati Morellas

COM S 409 – Exam 1

9/24/20

Q1.1 Answer

Adjacent systems:

- Air temperature sensors
- Heat source
- Alarm system

Q1.2 Answer

Data sent:

- Heat source on/off
- Alarm on/off

Q1.3 Answer

"If the temperature of the incubator falls too far below or rises too far above the set temperature range, then the system shall activate the alarm to alert the nurse."

Q2 Answer

Prototyping makes the requirements more "real" in the sense that by creating a prototype, the product use cases become more tangible and interactive for the client since they are able to see an instance of the product in action.

Q3.1 Answer

TRUE

Q3.2 Answer

FALSE

Q3.3 Answer

FALSE

Q3.4 Answer

TRUE

Q3.5 Answer

FALSE

Q4 Answer

Using EARS provides more benefits to outlining requirements because it lists the requirements in simple, clear statements, making them more understandable and distinguishable by their type. It is a structured way to write better textual requirements.

Q5.1 Answer

The transmission of the temperature is an *event.*

Q5.2 Answer

Using the event-driven EARS template: "When data is transmitted, the system shall record it within 0.5 seconds of transmission.

Q6 Answer

Functional requirements ask the question "What does the software have to do?" while non-functional requirements ask the question "How well does the software have to do something?" Functional requirements are obtained from the steps of the product use case scenarios and Non-functional requirements are divided into 8 categories: Look & Feel, Usability, Performance, Operational, and Maintainability.

Q7.1 Answer

Non-functional – Performance classification

Q7.2 Answer

Non-functional – Operational classification

Q7.3 Answer

Functional

Q7.4 Answer

Non-functional – Performance classification

Q7.5 Answer

Non-functional – Maintainability classification

Q8.1 Answer

A patient requests an appointment with a physician online

Q8.2 Answer

A patient has registered an account

Q8.3 Answer

1. Patient creates an account

2. Patient logs onto online portal
3. Patient creates a request to schedule an appointment
4. Patient fills out required information
5. Patient selects desired physician
6. Patient submits request to schedule appointment
7. Patient logs off

Q9 Answer

It sounds like Mr. Mirzaee is trying to make the point that when creating requirements for something, it is important to keep the client informed of the restrictions of their wants/needs and approach them in a more practical way. Since cars were very new in the 1900s and more people preferred to ride horses, the adoption of cars was low. However, horses are living beings and have their limits, so cars are a more practical way of transportation. Sometimes, clients will ask for things that seem unreasonable, so it is important to educate them on the constraints and potential possibilities of a system, so that the list of requirements can be higher quality.

Q10 Answer

Use Cases:

- The system will send automatic message to parent(s) when a child reaches a pre-set location on GPS
- Parents can set a point on GPS to receive notifications when their child reaches or exits proximity
- Parents can set a password on their child's phone so settings cannot be changed
- Parents can make a setpoint(s) for notifications
- Parents can set a notification interval, so they continuously receive notifications on the child's whereabouts
- Children can pull up their location information, including an address, all displayed on a map.