

# Non-functional Requirements Questionnaire

30

6

Correct

total points:40

questions:8

Detailed

1. The formal language of the non-functional requirement is:

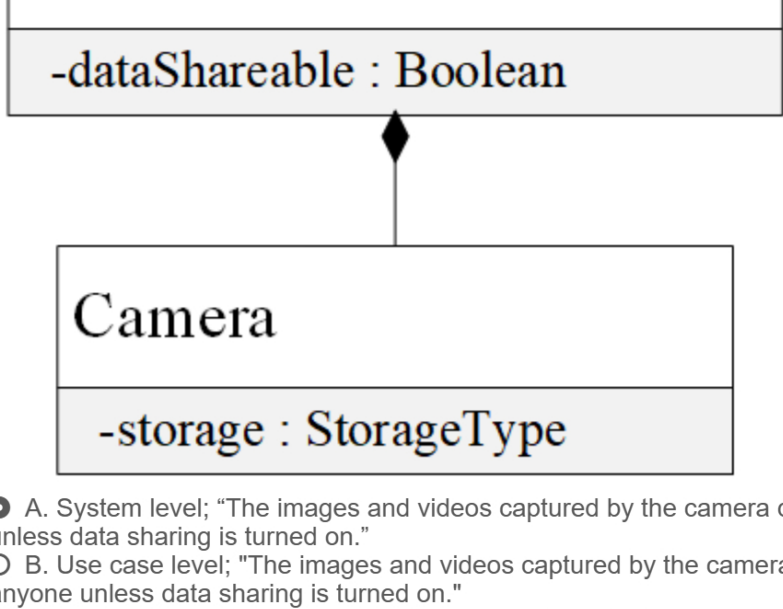
WHEN

Car.dataShareable = false

the System shall

Camera.storage = PRIVATE

Please refer to the following diagram to select the correct level and natural language for the non-functional requirement ( ) .



5 Points

- ☒ A. System level; "The images and videos captured by the camera do not leave the vehicle itself and are not transmitted to anyone unless data sharing is turned on."  
☐ B. Use case level; "The images and videos captured by the camera do not leave the vehicle itself and are not transmitted to anyone unless data sharing is turned on."  
☐ C. System level; "The images and videos captured by the cameras do not leave the vehicle itself and are not transmitted to anyone at any time."  
☐ D. Operation level; "The images and videos captured by the camera do not leave the vehicle itself and are not transmitted to anyone at any time."

Correct Answer

+5 Points

2. The formal language of the non-functional requirement is:

WHEN

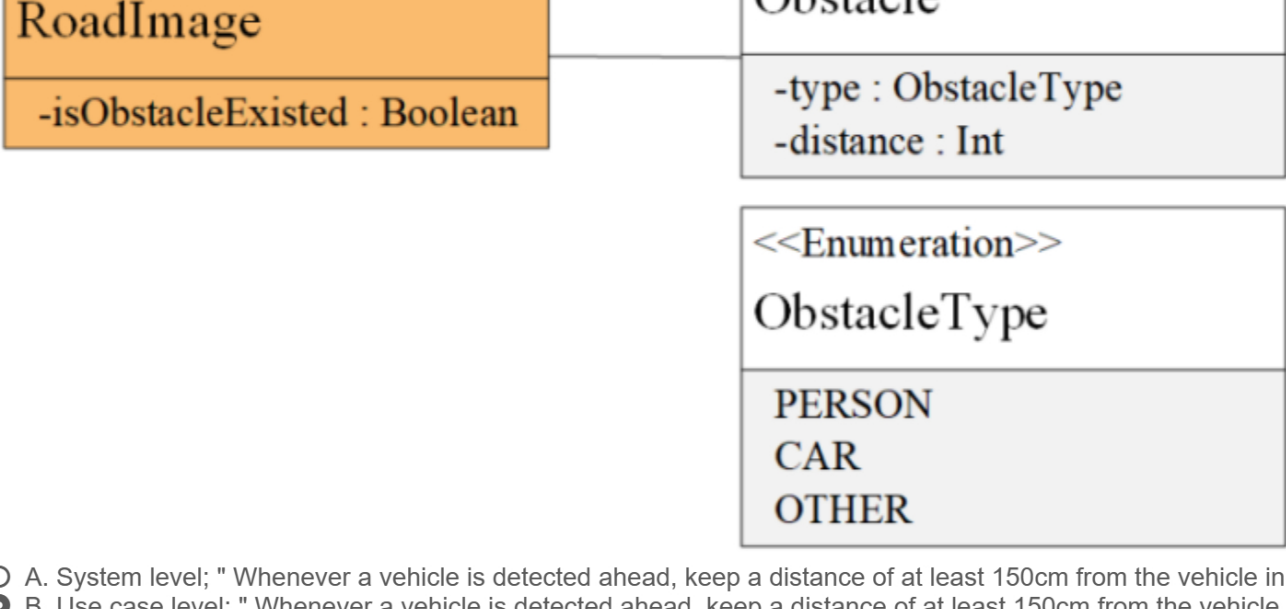
RoadImage.isObstacleExisted = TRUE and

Obstacle.type = CAR

the UC shall

Obstacle.distance >= 150cm

Please refer to the following diagram to select the correct level and natural language for the non-functional requirement ( ) .



5 Points

- ☐ A. System level; " Whenever a vehicle is detected ahead, keep a distance of at least 150cm from the vehicle in front."  
☒ B. Use case level; " Whenever a vehicle is detected ahead, keep a distance of at least 150cm from the vehicle in front."  
☐ C. Operation level; " Whenever an obstacle is detected in front, keep a distance of at least 150cm from the obstacle in front."  
☐ D. Use case level; " Whenever an obstacle is detected in front, keep a distance of at least 150cm from the obstacle in front."

Correct Answer

+5 Points

3. The formal language of the non-functional requirement is:

WHILE

Weather.Type = SUNNY or

Weather.Type = CLOUDY

the Operation shall

IdentifyImages.Correctness >= 98%

WHILE

Weather.Type = RAINY or

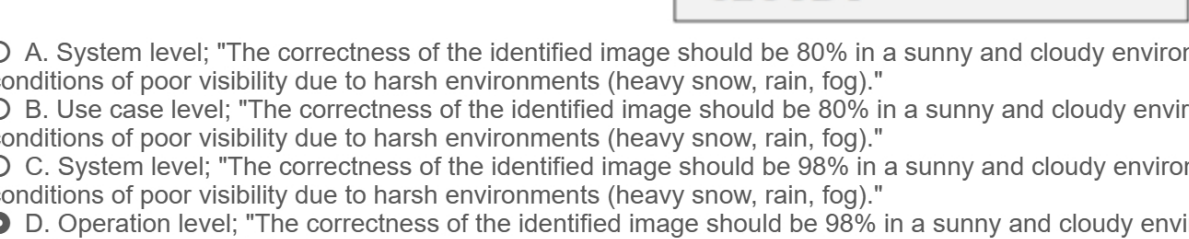
Weather.Type = SNOWY or

Weather.Type = FOGGY

the Operation shall

IdentifyImages.Correctness >= 80%

Please refer to the following diagram to select the correct level and natural language for the non-functional requirement ( ) .



5 Points

- ☐ A. System level; "The correctness of the identified image should be 80% in a sunny and cloudy environment and 98% in conditions of poor visibility due to harsh environments (heavy snow, rain, fog)."  
☐ B. Use case level; "The correctness of the identified image should be 80% in a sunny and cloudy environment and 98% in conditions of poor visibility due to harsh environments (heavy snow, rain, fog)."  
☐ C. System level; "The correctness of the identified image should be 98% in a sunny and cloudy environment and 80% in conditions of poor visibility due to harsh environments (heavy snow, rain, fog)."  
☒ D. Operation level; "The correctness of the identified image should be 98% in a sunny and cloudy environment and 80% in conditions of poor visibility due to harsh environments (heavy snow, rain, fog)."

Correct Answer

+5 Points

4. The formal language of the non-functional requirement is:

The Operation shall

isIdentifyObstacle = true and

Obstacle.type = any and

Person.sex = any and

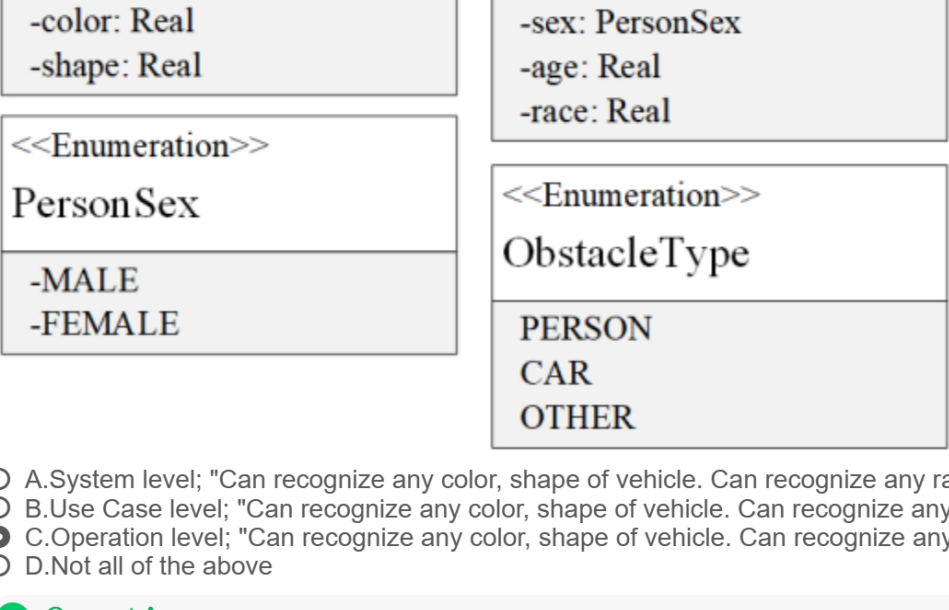
Person.age = any and

Person.race = any and

Car.color = any and

Car.shape = any

Please refer to the following diagram to select the correct level and natural language for the non-functional requirement ( ) .



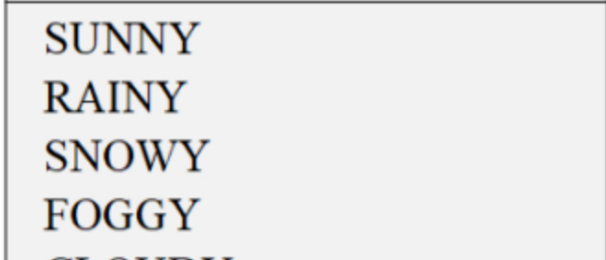
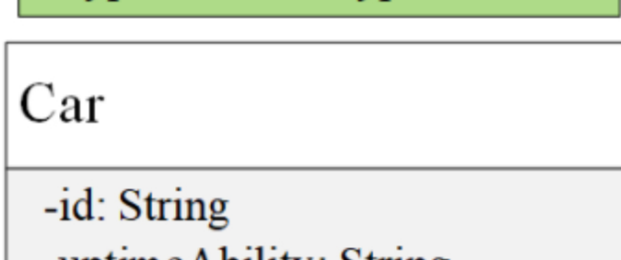
5 Points

- ☐ A. System level; "Can recognize any color, shape of vehicle. Can recognize any race, gender and age group of pedestrians."  
☐ B. Use Case level; "Can recognize any color, shape of vehicle. Can recognize any race, gender and age group of pedestrians."  
☒ C. Operation level; "Can recognize any color, shape of vehicle. Can recognize any race, gender and age group of pedestrians."  
☐ D. Not all of the above

Correct Answer

+5 Points

5. Please select the correct formal language to describe the non-functional requirement "The system should be able to operate normally in harsh environments (e.g., heavy snow, rain, fog) up to 80% of the time." in conjunction with the figure below. ( )



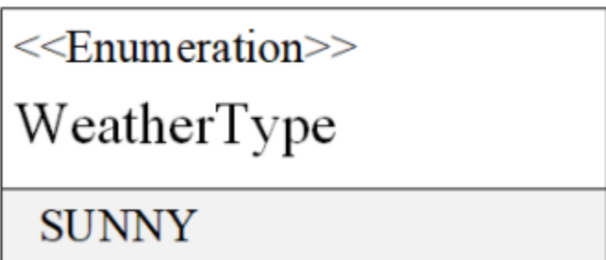
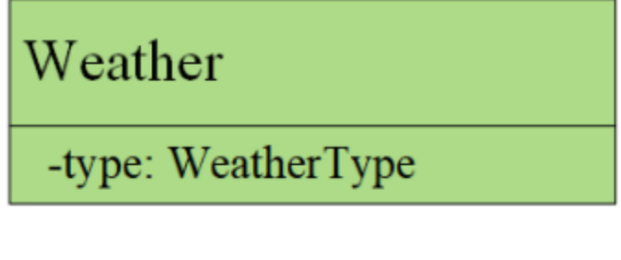
5 Points

- ☒ A.  
☐ B.  
☐ C.  
☐ D.

Correct Answer

+5 Points

6. Please select the correct formal language to describe the non-functional requirement "The efficiency of identifying images should be 98% in sunny and cloudy environment, and 80% in poor visibility conditions caused by bad environment (heavy snow, rain, fog)." in conjunction with the figure below. ( )



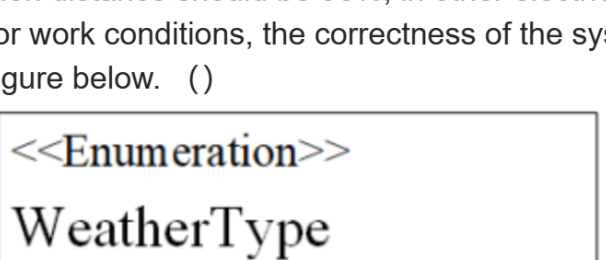
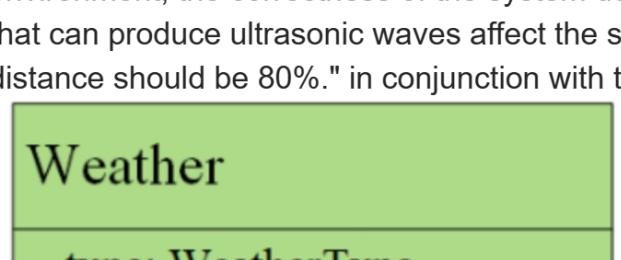
5 Points

- ☒ A.  
☐ B.  
☐ C.  
☐ D.

Correct Answer

+5 Points

7. Please select the correct formal language to describe the non-functional requirement "In the normal environment, the correctness of the system detection distance should be 98%; in other electrical equipment that can produce ultrasonic waves affect the sensor work conditions, the correctness of the system detection distance should be 80%." in conjunction with the figure below. ( )



5 Points

- ☐ A.  
☒ B.  
☐ C.  
☐ D.

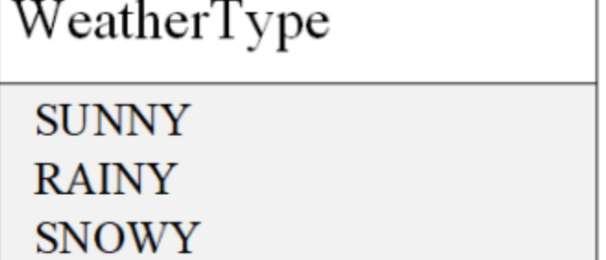
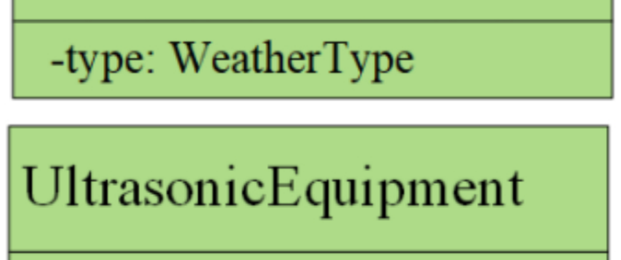
Wrong Answer

+0 Points

Correct Answer:

A.

8. Please select the correct formal language to describe the non-functional requirement "In the normal environment, the efficiency of the system detection distance should be 98%; in the weather conditions or other electrical equipment that can produce ultrasonic waves affect the sensor work conditions, the efficiency of the system detection distance should be 80%." in conjunction with the figure below. ( )



5 Points

- ☐ A.  
☒ B.  
☐ C.  
☐ D.

Wrong Answer

+0 Points

Correct Answer:

A.