Hopewell Senior High School

Robotic Design and Coding Fundamentals: 1

Unit 6 Quiz

Due Date: **October 17, 2023**

Instructor: **Lori Colangelo**

ID: **1309**

Name: _____ **Score:** / 100

Question 1 /1

This is called a common block.

- [ ] True
- [ ] False

Question 2 /1

Which of the following is the best description of what the Eye Sensor does?

- [ ] It reports the (X,Y) position of the VR Robot.
- [ ] It reports the distance between the VR Robot and the nearest solid object.
- [ ] It can be controlled to pick up and drop disks with metal cores.
- [ ] It detects if there is an object present and if so, the color of that object.

Question 3 /1

A VR Robot has one Eye Sensor.

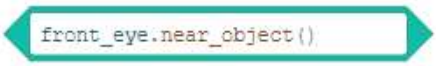
- [ ] True
- [ ] False

ID: **1309** Due Date: October 17, 2023

Name: _____

Question 4 /1

What does this Switch Block do?



- ☐ The Distance Sensor near object block reports if the Eye Sensor is close enough to an object to detect a color (red, green, blue, none).
- ☐ The Eye Sensor near object block reports if the Eye Sensor is close enough to an object to detect a color (red, green, blue, none).
- ☐ The Eye Sensor near object block reports if the Eye Sensor not working.
- ☐ The Eye Sensor near object block reports if the Eye Sensor is close enough to an object to detect a location.

Question 5 /1

The color the sensor is looking for in this eample is

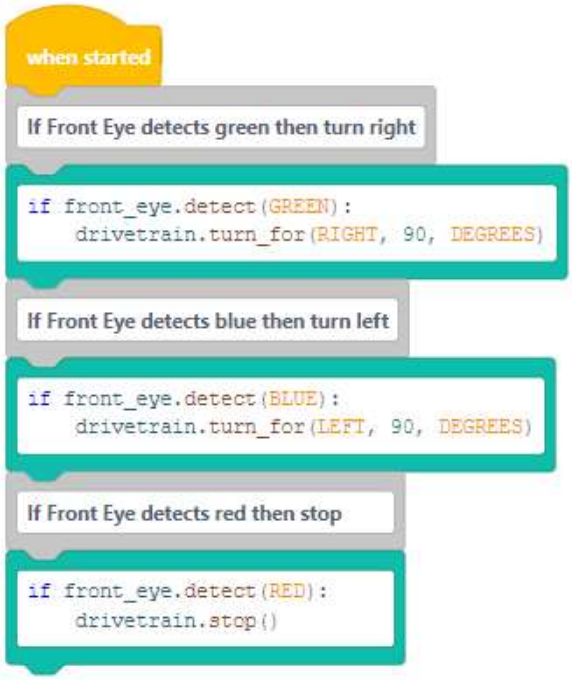
- ☐ Blue
- ☐ Green
- ☐ Red
- ☐ Black

ID: **1309** Due Date: October 17, 2023

Name: _____

Question 6 /1

In this code the VR Robot will turn right if it detects green and turn left if it detects blue.



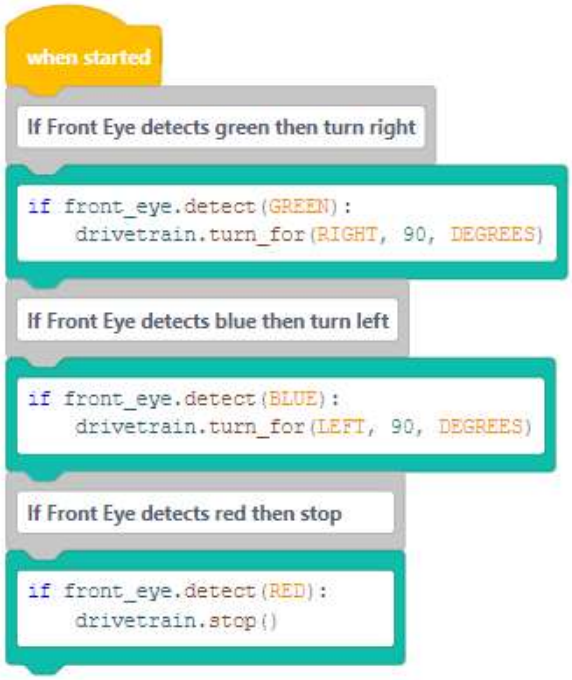
- [ ] True
- [ ] False

ID: **1309** Due Date: October 17, 2023

Name: _____

Question 7 /1

In the example what happns is the VR Robot detects red?



- [ ] Turns left
- [ ] Turns right
- [ ] Stops driving
- [ ] Drive forward.

ID: **1309** Due Date: October 17, 2023

Name: _____

Question 8 /1

In this project, the robot is using conditionals.

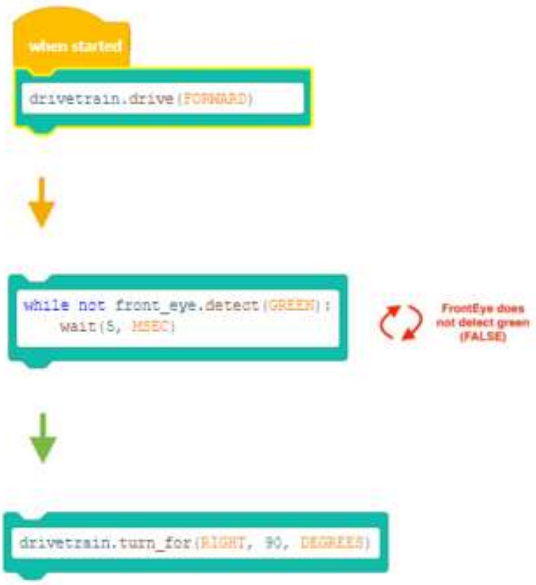
- [ ] True
- [ ] False

ID: **1309** Due Date: October 17, 2023

Name: _____

Question 9 /1

The If then block ithe same as the wait until block.



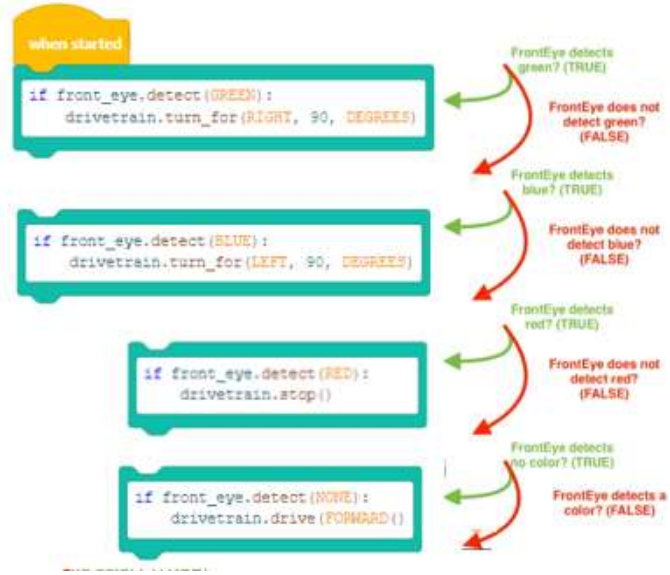
- [ ] True
- [ ] False

ID: **1309** Due Date: October 17, 2023

Name: _____

Question 10 /1

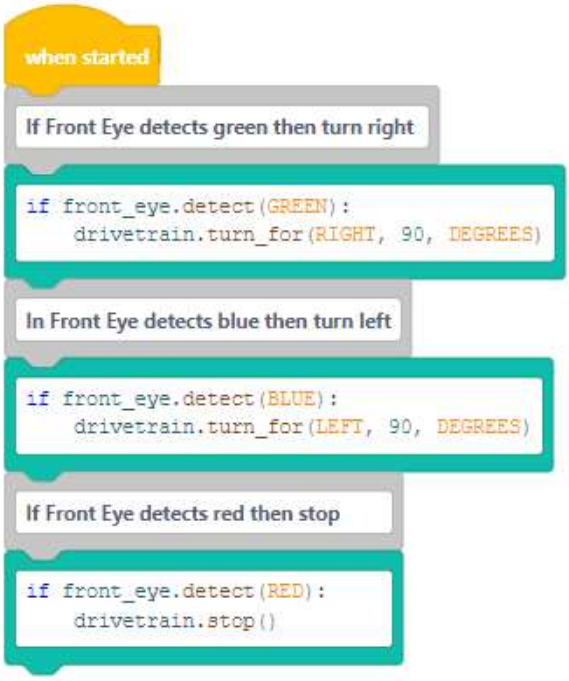
If then blocks require the VR Robot to make a decision. If the condition is TRUE, then the blocks inside the If then C block are run. If the condition is FALSE, then the blocks inside the If then C block are skipped.

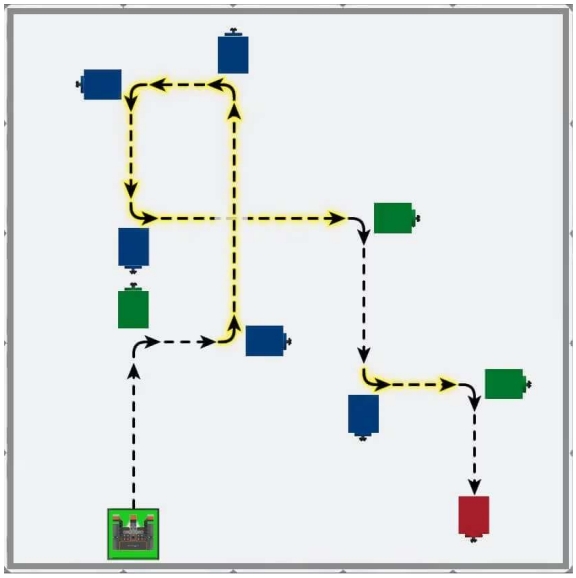


- [ ] True
- [ ] False

Question 11 /1

Will this project get the VR Robot through the Disk Maze Challenge successfully?


when started
If Front Eye detects green then turn right
if front_eye.detect(GREEN):
drivetrain.turn_for(RIGHT, 90, DEGREES)
In Front Eye detects blue then turn left
if front_eye.detect(BLUE):
drivetrain.turn_for(LEFT, 90, DEGREES)
If Front Eye detects red then stop
if front_eye.detect(RED):
drivetrain.stop()



- [ ] True
- [ ] False

Name: _____

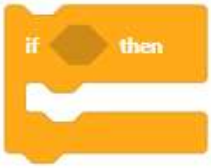
Question 12 /4

Match Conditionals (Block and Switch Block).

☐ 1.

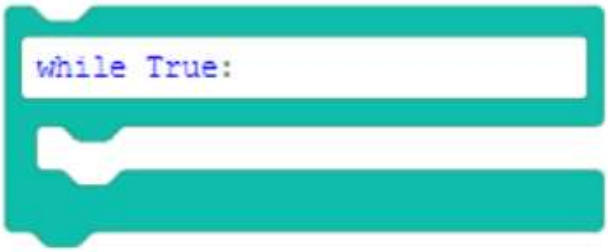
☐ 2.

☐ 3.

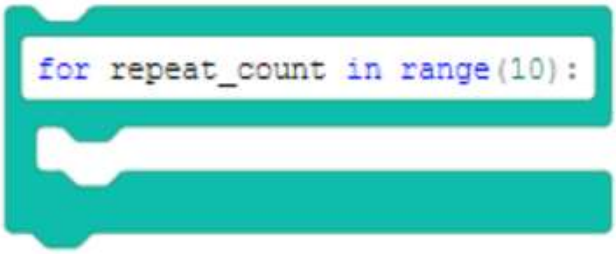


☐ 4.

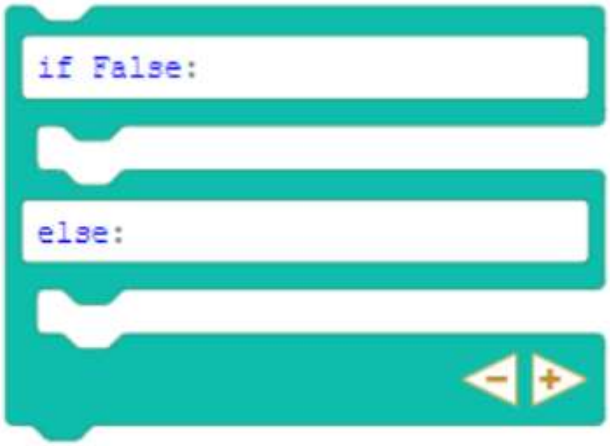
A.



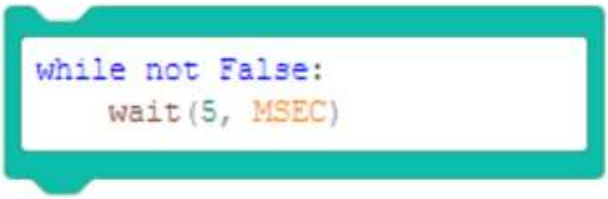
B.



C.



D.



Answer Key

Possible Points: 15 Factor: x1.00 Test Value: 15

Instructions for grading: Grade each question and tally the score to obtain the total test points. If the factor does not equal 1, multiply the total points by the factor to obtain the student's final score.

Question 1

This is called a common block.

☐ False

1 possible pts.

Question 2

Which of the following is the best description of what the Eye Sensor does?

☐ It detects if there is an object present and if so, the color of that object.

1 possible pts.

ID: **1309**

Due Date: October 17, 2023

Answer Key Possible Points: 15 Factor: x1.00 Test Value: 15

Question 3

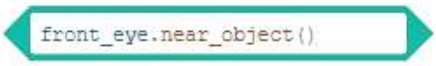
A VR Robot has one Eye Sensor.

☐ False

1 possible pts.

Question 4

What does this Switch Block do?



☐ The Eye Sensor near object block reports if the Eye Sensor is close enough to an object to detect a color (red, green, blue, none).

1 possible pts.

ID: **1309** Due Date: October 17, 2023

Answer Key

Possible Points: 15 Factor: x1.00 Test Value: 15

Question 5

The color the sensor is looking for in this eample is

```
front_eye.detect(RED)
```

☐ Red

1 possible pts.

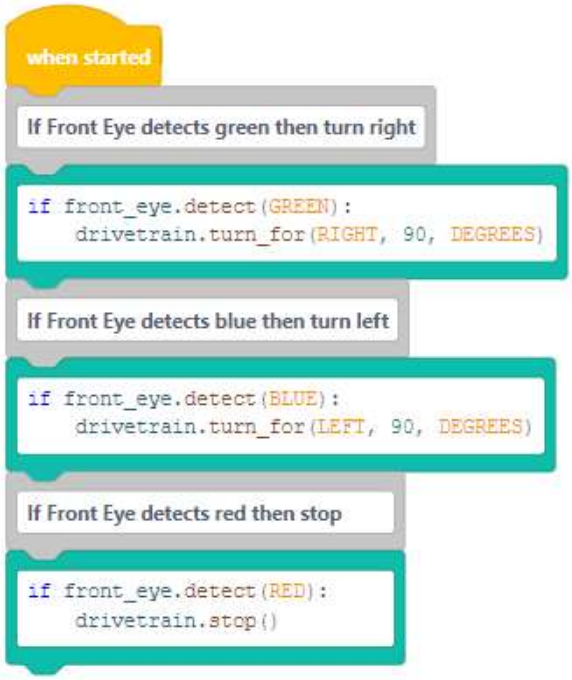
ID: **1309**

Due Date: October 17, 2023

Answer Key Possible Points: 15 Factor: x1.00 Test Value: 15

Question 6

In this code the VR Robot will turn right if it detects green and turn left if it detects blue.



☐ True

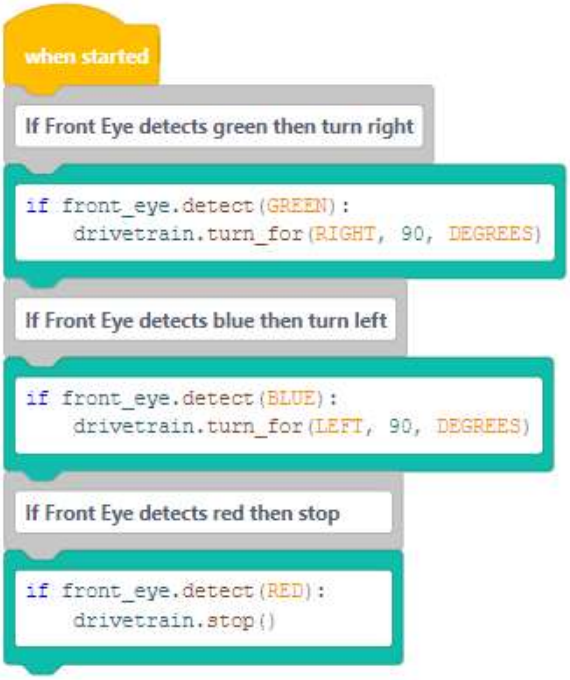
1 possible pts.

ID: **1309** Due Date: October 17, 2023

Answer Key

Possible Points: 15 Factor: x1.00 Test Value: 15

Question 7



In the example what happns is the VR Robot detects red?

☐ Stops driving

1 possible pts.

ID: **1309** Due Date: October 17, 2023

Answer Key

Possible Points: 15 Factor: x1.00 Test Value: 15

Question 8

In this project, the robot is using conditionals.

☐ True

1 possible pts.

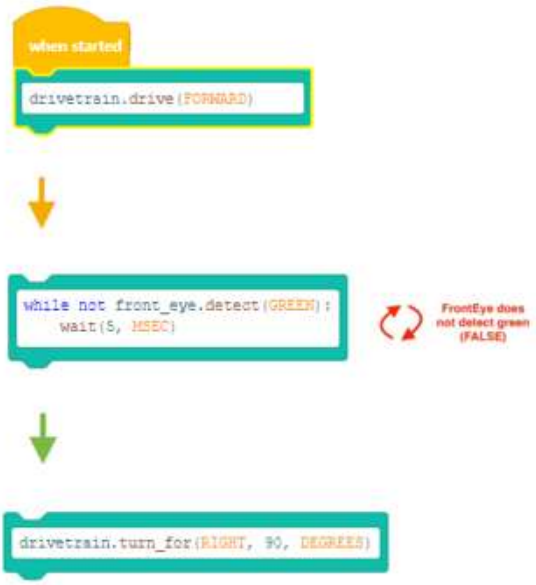
ID: **1309** Due Date: October 17, 2023

Answer Key

Possible Points: 15 Factor: x1.00 Test Value: 15

Question 9

The If then block ithe same as the wait until block.



☐ False

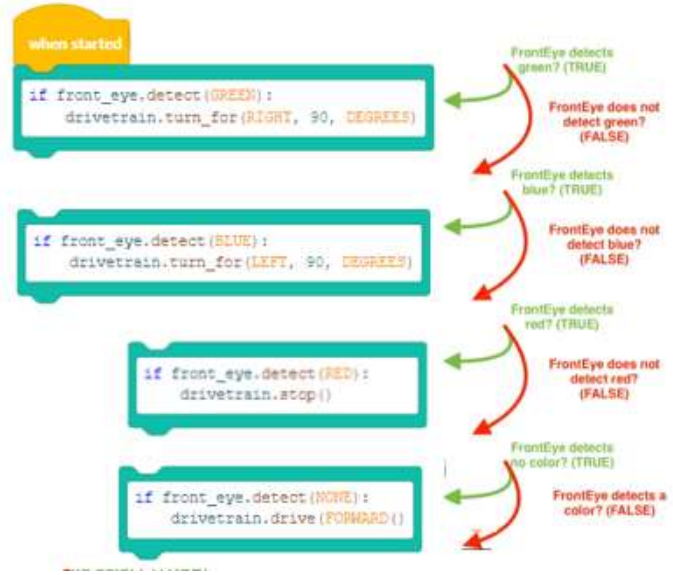
1 possible pts.

ID: **1309** Due Date: October 17, 2023

Answer Key Possible Points: 15 Factor: x1.00 Test Value: 15

Question 10

If then blocks require the VR Robot to make a decision. If the condition is TRUE, then the blocks inside the If then C block are run. If the condition is FALSE, then the blocks inside the If then C block are skipped.

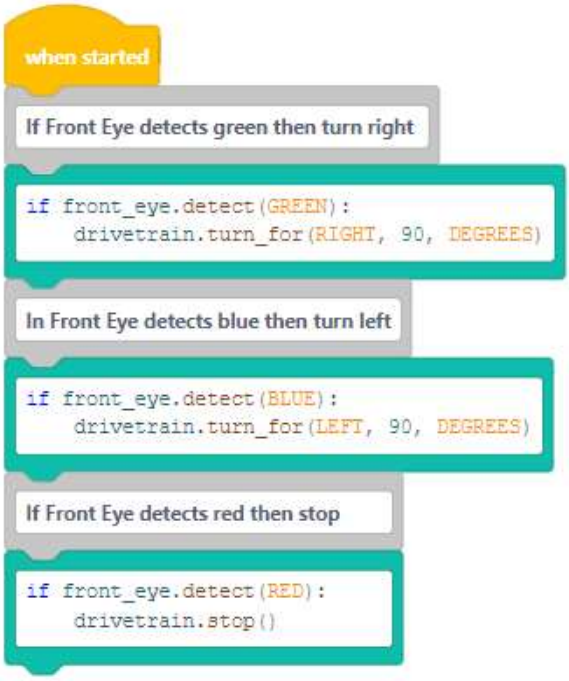


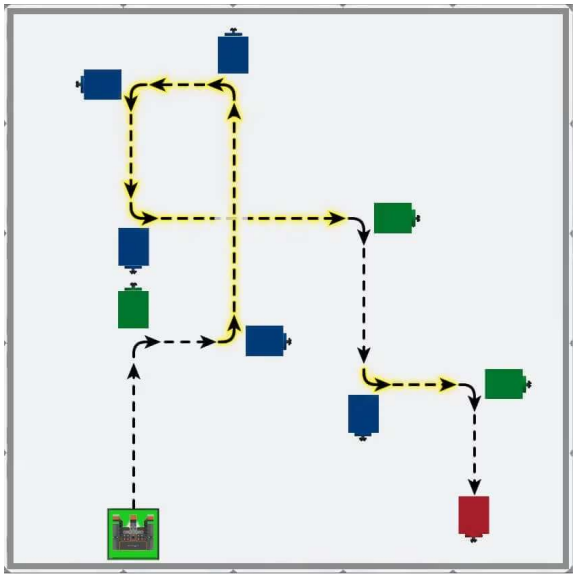
☐ True

1 possible pts.

Question 11

Will this project get the VR Robot through the Disk Maze Challenge successfully?





☐ True

1 possible pts.

Answer Key

Possible Points: 15 Factor: x1.00 Test Value: 15

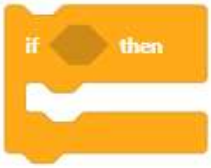
Question 12

Match Conditionals (Block and Switch Block).

C 1.

D 2.

A 3.



B 4.

4 possible pts. / partial credit