ACTIVITY SHEET

SESSION 17

Self Driving Car

We shall continue from the last session and add motion capabilities to the Quarky car based on the sign detection it does using the code we wrote in the last session.

This activity sheet belongs to _____

MATERIALS REQUIRED

- ☐ Computer/Laptop/Tab with PictoBlox installed
- ☐ USB Cable
- ☐ Quarky Robot

INTRODUCTION

We want our Quarky car to be able to recognize the signs from the landmarks in its path, and perform the following actions accordingly:

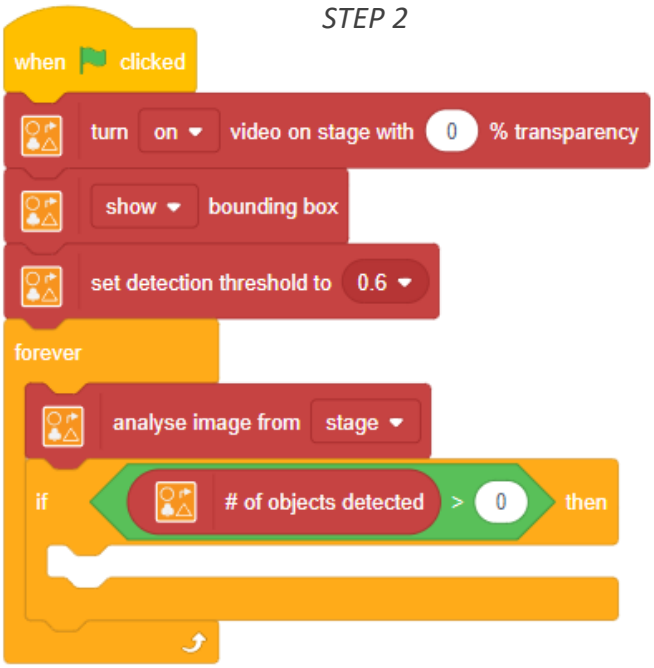
Sign	*Action*
Go	Move Forward
U Turn	Move Backward
Turn Left	Move Left
Turn Right	Move Right

Now, let us continue from the code we wrote in the last session and add the actions given in the above table in our code. This will transform Quarky into a self-driving car.

STEP-BY-STEP

1. Open the previous PictoBlox file of **Self Driving Car** and connect your device with Quarky, via bluetooth.
2. Replace the **if () else** block with the **if ()** block. Add the same condition as before.
3. Add another **if ()** block inside the **if ()** block. The condition we are going to put inside this second **if ()** block is that: is the object class GO?
4. Add **() contains ()?** block from the **Operators** extension in the if block condition.

STEP 2



6. Add the **() of object ()** block from the **Recognition Cards** palette in the first space of the **() contains ()?** block. Select the parameter as **class**. In the second space add "**Go**".
7. Add **go () at () % speed for () seconds** block from **Robot** extension. Select direction as **Forward**, speed as **60%,** and time as **0.5 seconds**.
8. Duplicate the **if ()** block three times for the following conditions:
   - **8.1. Turn Left** – Select direction as **Left**, speed as **40%,** and time as **0.5 seconds**.
   - **8.2. Turn Right** – Select direction as **Right**, speed as **40%,** and time as **0.5 seconds**.
   - **8.3. U-Turn** – Select direction as **Backward**, speed as **60%,** and time as **0.5 seconds**.
9. Hurray! You have finally made your very own Self-driving Car.

SAVING THE PROGRAM

Save the project file: **Self driving car,** by clicking on **File -> Save**.

FINAL SCRIPT