



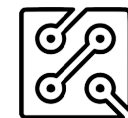
**GADGET  
GURU**

Chryston High School



# **Workshop ?: Robotics with the Bit:bot**

# What is a bit:bot?





# Where is Python used?

- Google
- Youtube
- Banks
- Shops - online stores and other systems they might use
- Medical robots - perform operations and can perform more accurately and quickly than a human
- NASA - mission control use Python programs to monitor space missions
- Disney - animated movies can take a long time to make and a lot of the process is very repetitive. Disney automates these repetitive parts using Python code to be able to finish the movie faster.

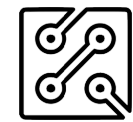
# Get the Bit:Bot Moving

- Download code from:



# Challenges

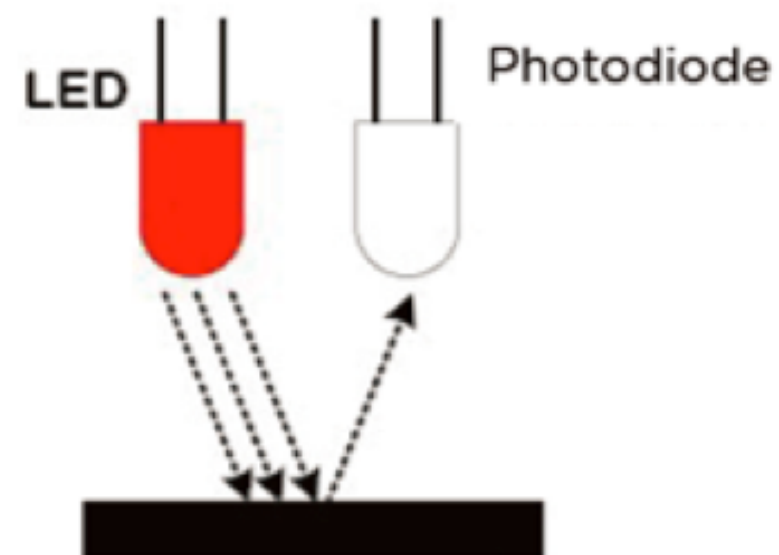
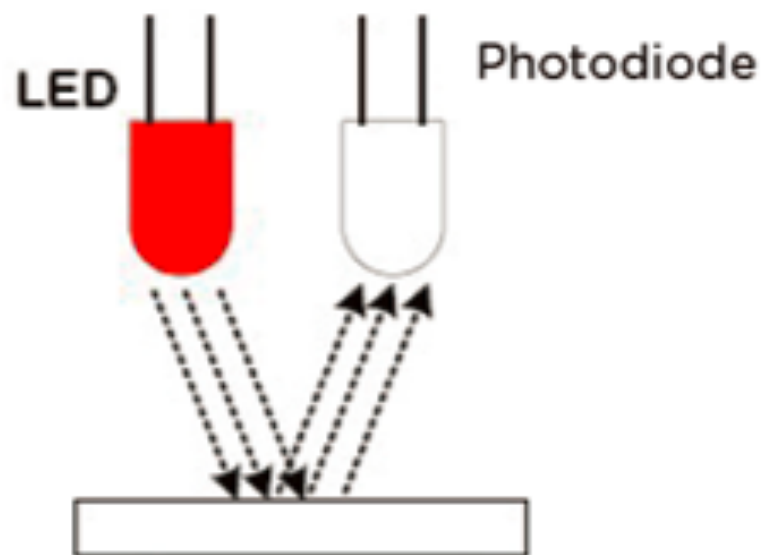
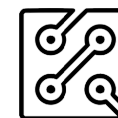
1. Make the robot return to its start position
2. Make the robot drive in a square



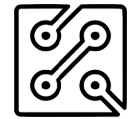
# Line Follower







Left Sensor	Right Sensor	Action
Black (1)	Black (1)	Forward
Black (1)	White (0)	???
White (0)	Black (1)	???
White (0)	White (0)	???



# Making Decisions

The simplest conditional statement is an if statement

```
if condition:  
    code
```

```
if condition:  
    code  
else:  
    code
```

```
if condition1:  
    code  
elif condition2:  
    code  
else:  
    code
```



# Making Decisions

```
if ((lline == 1) and (rline == 1)):
    forward(100)
elif ((lline == 1) and (rline == 0)):
    ???
elif ??? :
    ???
else:
    ???
```