Name_____

U1-2.1 Let's explore the EdScratch environment

One of the best things about Edison is that you can make your own programs for your robot! To write a program for Edison, we need to use some special **software**.

Jargon buster

All computers have two main parts: hardware and software.

Hardware is the physical parts of a computer (or robot).

Software is the set of programs and applications that make hardware, like a computer or a robot, run.

The software we will use with Edison is a robot **programming language**.

Jargon buster

A **programming language** is a set of rules and instructions used to write computer programs. EdScratch is a programming language specially designed for programming Edison robots.

The programming language we will use is called EdScratch. Let's learn a bit about the EdScratch programming language.

Task 1: Check out EdScratch

You can access EdScratch online.

Use this link

Go to www.edscratchapp.com

Whenever you want to program Edison using EdScratch, you will always need to go to the EdScratch app.

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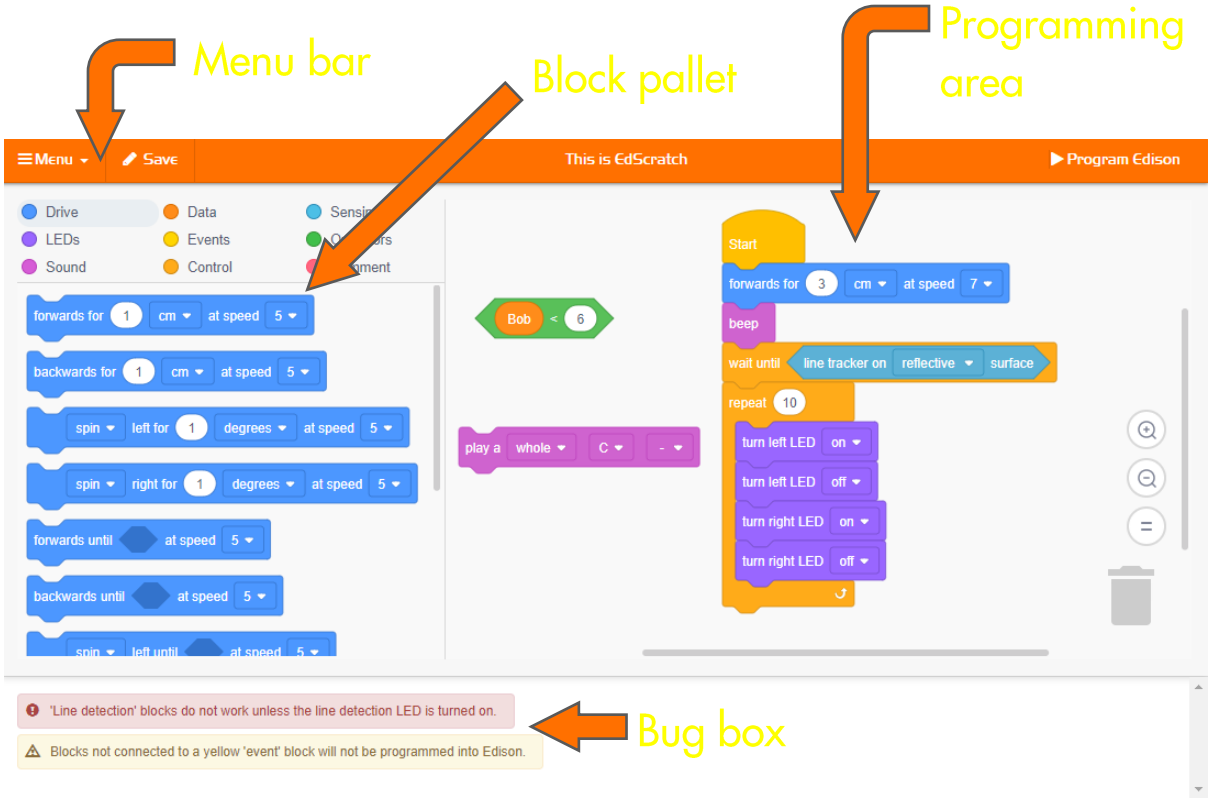
Here is what the EdScratch environment looks like:



The EdScratch programming environment has four main parts:

Block pallet
All of the blocks you can use are in the block pallet. To use a block, select it from the block pallet, and drag it into the programming area.

Programming area
The large area where you can connect blocks together into programs is called the programming area. Drag and drop blocks from the block pallet into this area to use them in your program.

Menu bar
Options such as 'Save' and 'Load' are accessed from the menu bar. The menu bar also has the 'Program Edison' button.

Bug box
Below the block pallet and programming area is the bug box. Warning messages will show up in the bug box.

Look at EdScratch on your computer. Find each of the four main parts of the EdScratch environment.

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Task 2: Load and download the test program

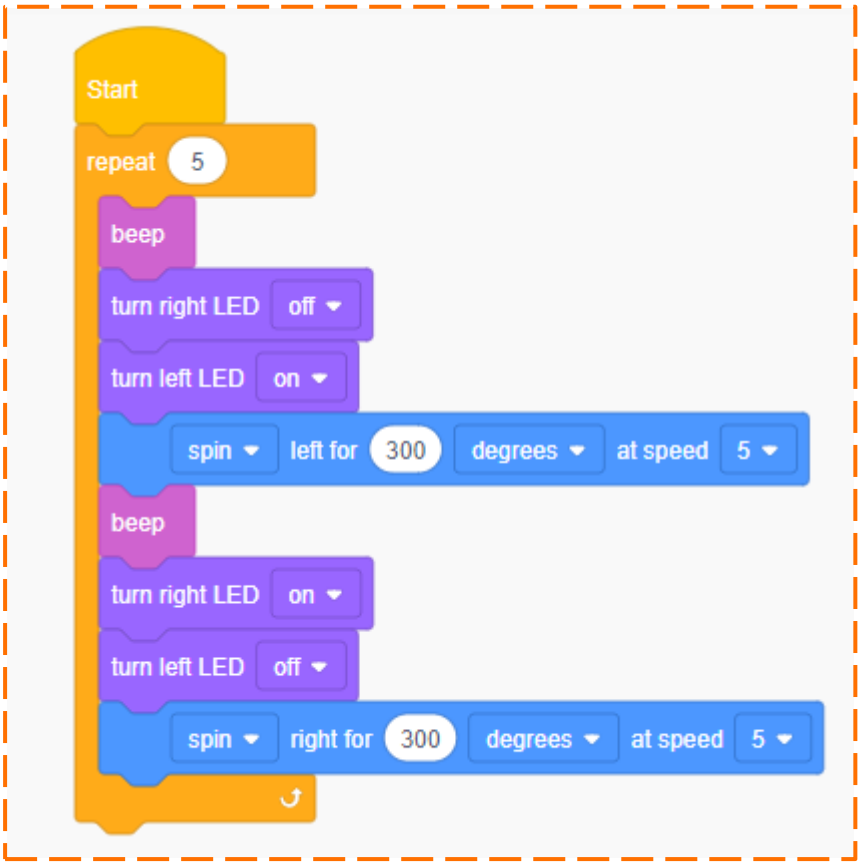
EdScratch has some demo programs already written. Try loading and downloading the demo program called **Test_program**.

Load the Test_program demo program

To load the demo **Test_program**, follow these steps:

1. In EdScratch, go to the menu bar and select the menu drop-down. Find and select the option called **Load Demos**. This will open a pop-up window with all of the demo programs.
2. Find and select the program called **Test_program**. The program will load in the programming area.

Here is what the **Test_program** looks like:



Once the program loads in the programming area, you can download it to your Edison robot.

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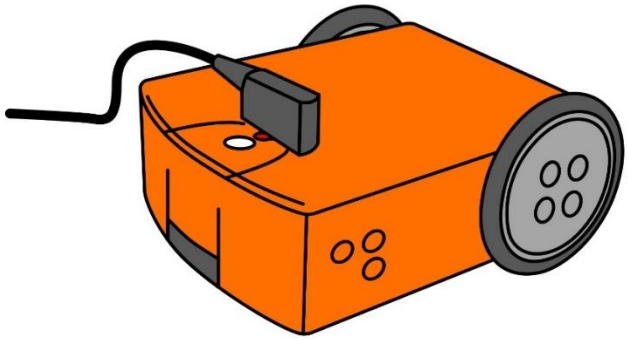
Download Test_program to Edison

Whenever you want to download a program from EdScratch to Edison, you need to follow these steps:

1. Connect Edison to your computer using the EdComm cable.
2. Make sure the volume is turned up all the way on the computer.
3. Press the record (round) button on Edison **one time**.
4. Go to the menu bar in EdScratch and click on the Program Edison button.
5. A pop-up window will open. Once the program is ready, a button called Program Edison will appear at the bottom of the pop-up window.
6. Click on the Program Edison button in the pop-up window.



Why is that?

Edison cannot understand the blocks in EdScratch the way they look on your computer screen. The blocks need to be changed into a format that Edison can understand before the program can be downloaded. This can take a bit of time.

That's why it can take a little while for the Program Edison button in the pop-up window to appear.

You will hear the program downloading to Edison. Once it is done downloading, Edison will make the 'success' beep. Don't unplug Edison until you hear the beep!

Why is that?

Edison will let you know if the program downloads correctly by making the 'success' beep. This is the same sound you hear when you first turn Edison on.

There's another sound Edison might make if a program does not download correctly. We call this the 'fail' sound. It means something went wrong when the program tried to download. If Edison makes this sound, try starting your download again.

After you hear Edison make the 'success' beep, unplug the robot from the EdComm cable. Press the play (triangle) button **one time** to run the program.