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# INTRODUCTION TO SCRATCH



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# What is Scratch

Before we take a look at what scratch is, we need to have an idea of what programming is.

## **What is Programming?**

Programming can easily be described as the art of creating programs. We have different tools used to program. In this course we will be looking at the basics of programming through a visual tool known as Scratch.

## **What is Scratch?**

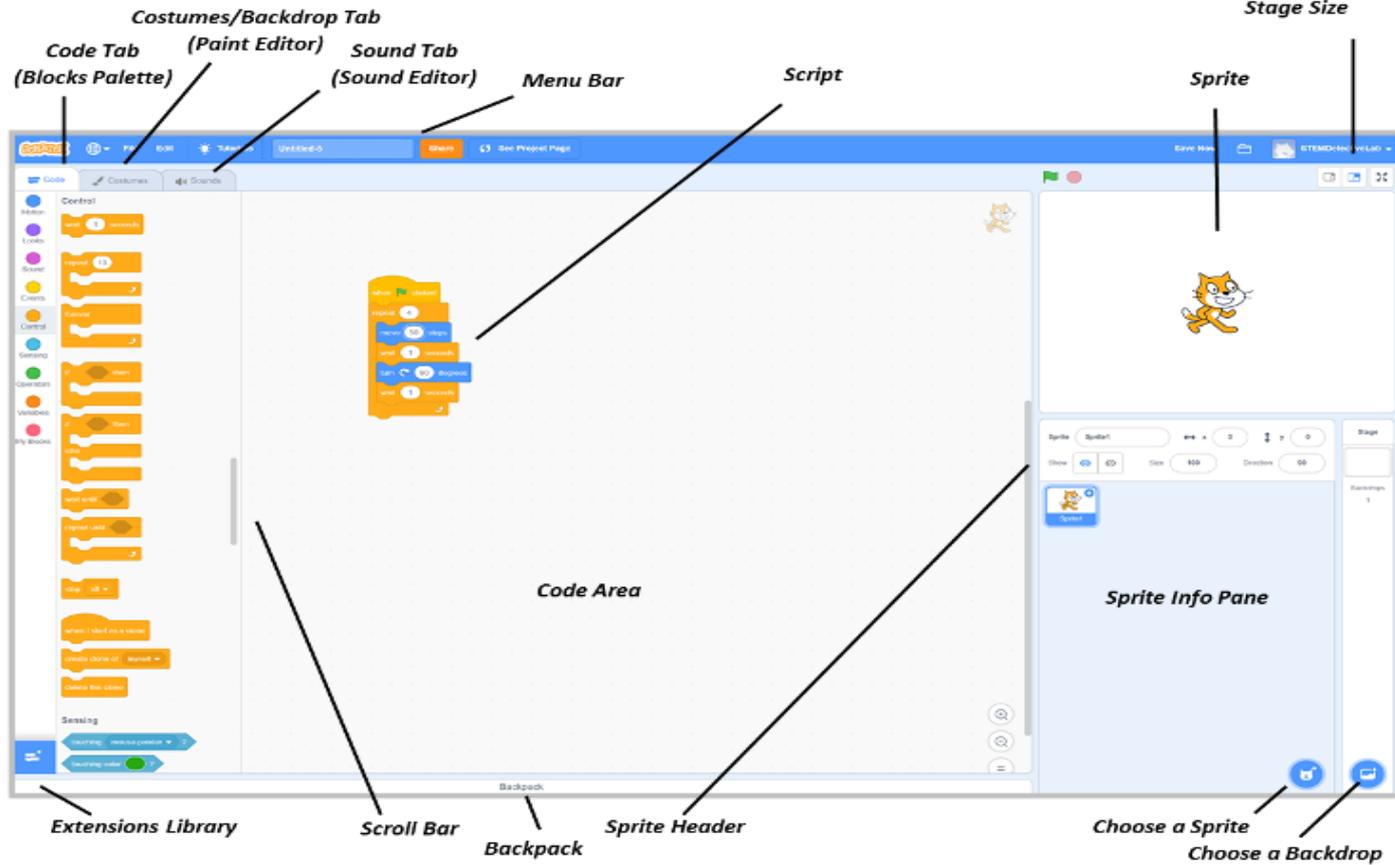
Scratch is an open source (free) software created by MIT. It is designed, developed and moderated by the Scratch Foundation, a non-profit organization.

Scratch can be used to create or program your own interactive stories, games and animations.



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# SCRATCH INTERFACE





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# SCRATCH TERMS

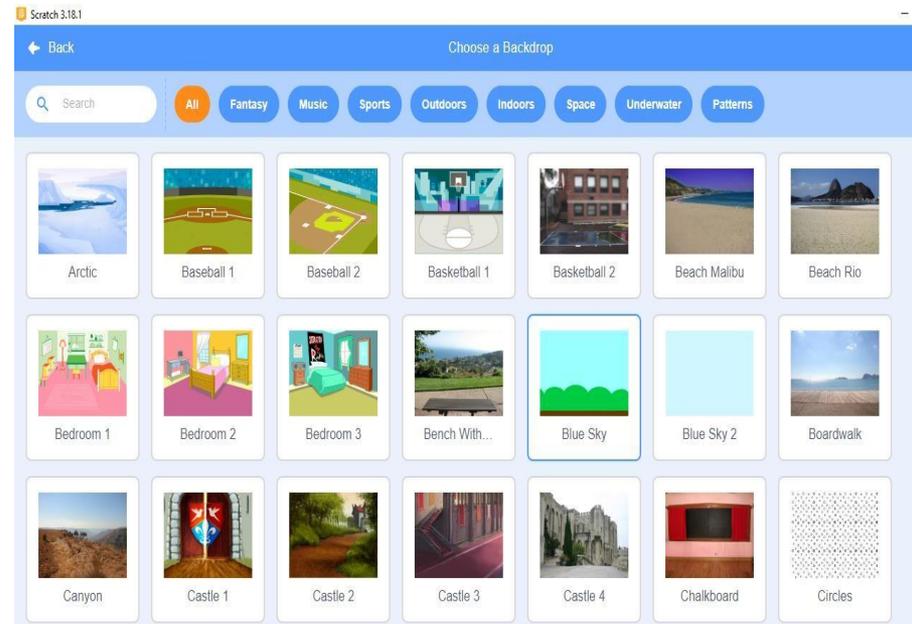
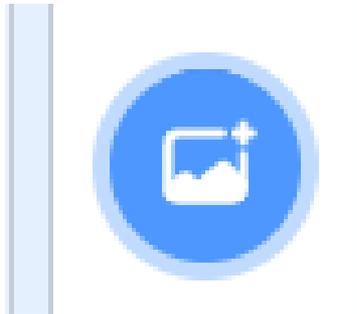
1. Backdrop. This is the background of your project whether an animation or a game.
2. Sprite. This is anything that is added to your backdrop. A sprite could be a human, a letter or even a set of drums.
3. Sprite header. This is where you can change the sprites name, size and direction.
4. Stage. The stage is where you see all your activities.
5. Code area. This is where the blocks of code are connected.
6. Script. A collection of blocks of code.
7. Code tab. This tab has all different types of code blocks you can select for your sprites to be interactive.
8. Backdrops tab. Also called costumes. This is the applications paint editor.
9. Sound tab. This tab allows you to edit your sounds e.g making the sound go faster, slower or louder.
10. Extensions library. This is where all extensions are stored.
11. Menu bar. This contains options for changing language, saving your file and getting tutorials



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# HOW TO ADD A BACKDROP

The first thing one could do when creating an animation or a game is to set the environment for it. This is done by adding a backdrop. To add a backdrop click on the choose backdrop icon and select your desired backdrop.

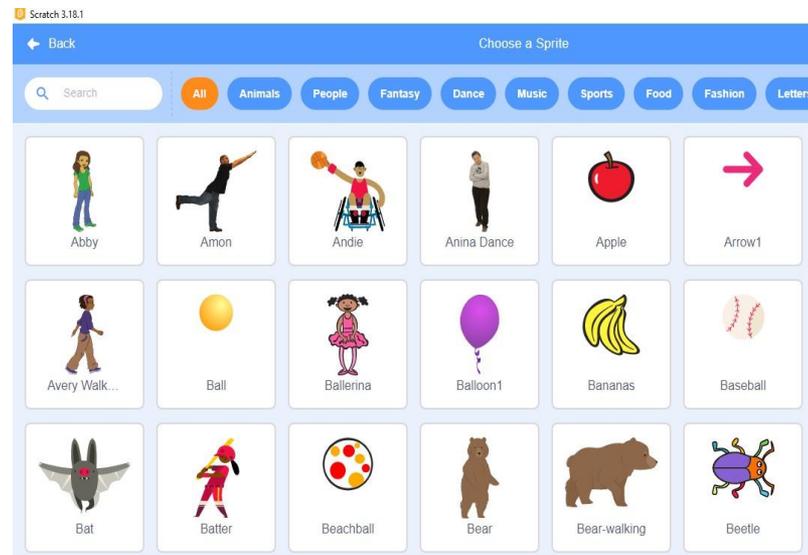




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# HOW TO ADD A SPRITE

To add your sprite click on the “choose a sprite” icon next to the choose a backdrop icon and your bottom right corner. Then select your desired sprite.



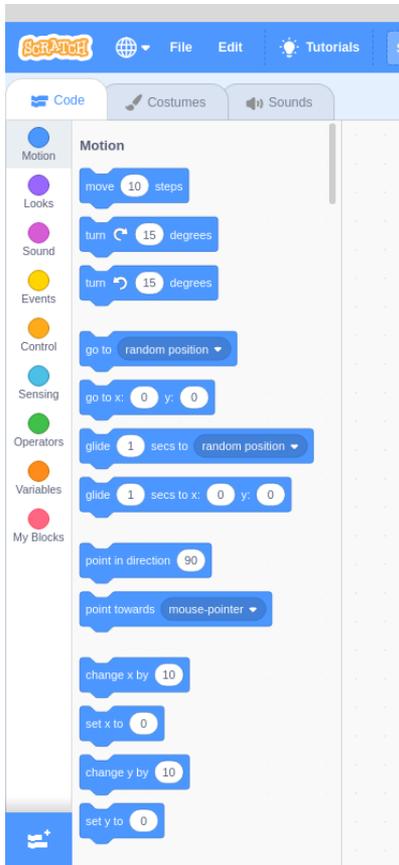


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# CODE TAB

The code tab has different sections that are used to make the sprite react in different ways. These sections are:

1. **Motion:** has blocks of code that enable your sprite to move in different directions
2. **Looks:** has blocks of code that enable your sprite to change in terms of size, colour and also enables your sprite to be able to talk.
3. **Sound.** Has blocks of code that enable your sprite to play or stop different kinds of sounds and set the pitch and volume to your liking.
4. **Events.** Has blocks that trigger an event in your project.
5. **Control.** Controls the blocks within your scripts, inserting conditional statements, loops, repeats and pauses
6. **Sensing.** Sensing blocks let you identify what is happening at a given point and make your sprites or background respond.
7. **Operators.** Has blocks used to script math equations and string handling
8. **Variables.** Has blocks that let you create variables.
9. **My blocks.** Allow you to create your own blocks.

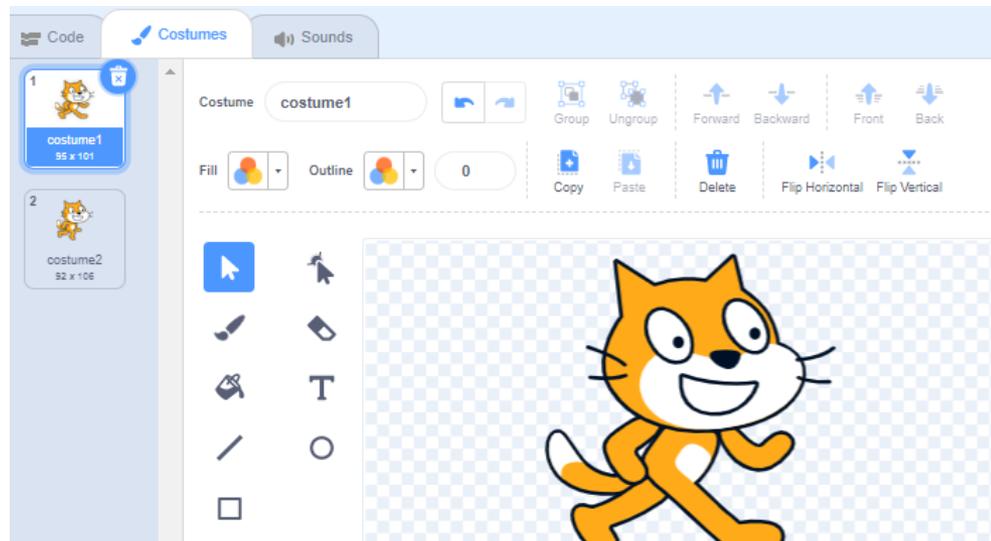




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# COSTUME TAB

The costume tab allows one to view, create, and edit a sprite's costumes.





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# SOUND TAB

The sound tab allows one to make, view, and edit the sprite's sounds.

