

Reference Resources

Algorithms and programming (Part-1)

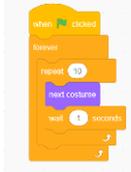
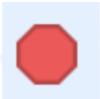
1. What is Scratch?

Scratch is a fun **coding app** for kids.

You can make **stories, games, and animations** by joining **code blocks**.

2. The Main Parts of the Scratch Screen

Important Words

Word	Word	Meaning
	Sprite	A character or thing in Scratch
	Stage	The place where you see the story
	Blocks	Codes
	Green Flag	Starts your project
	Loop / Repeat	Do something again and again
	Backdrop	The background picture
	Red/pink Button	Stops your project

Algorithm is a set of instructions.

Sequence of an algorithm is **the order** of the instructions.

A **bug** in the program is **an error** that stops the program.

Debugging is the process of **finding and fixing the bugs**.

The Block Groups

Color / Group What it does

Motion Moves or rotates the sprite. (Example: *move 10 steps*)

Looks Makes the sprite **talk or change color**.

Control Tells the sprite **how many times** to do something.

Events **Starts your code**. (Example: *when green flag clicked*)

Sound Plays sounds or records sounds.

Algorithms and programming (Part-2)

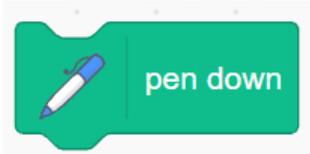
Algorithm is a set of precise instructions that a program follow.

Debugging- Finding and fixing mistakes (bugs) in a program.

Decomposition - Breaking down a problem into smaller parts in programming

Colour range of the Scratch pen tool is **0-200**

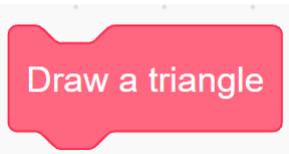
Pen block is found in Extensions for in scratch.



To start drawing



To stop drawing



Custom block - a block you create yourself to group many blocks



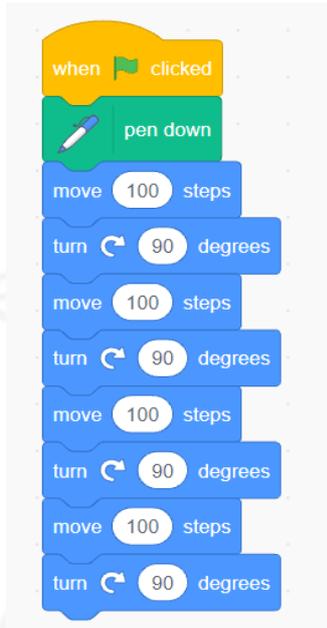
The center of the stage X-0, Y-0



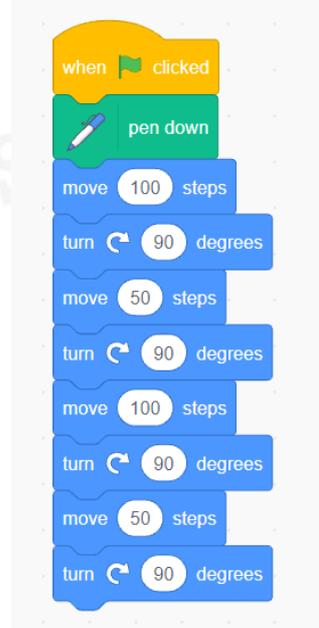
To reduce the number of codes



Triangle



Square



Rectangle

Managing my digital world



Files and folders on computer are like electronic cabinets.

Files and Folders

We save the files to organize into folder

File - a data/any single document on computer

Folder - a place to keep the file

Sub-folder - a folder inside a big folder

Directory - a collection of folders and files



Directory



Folders



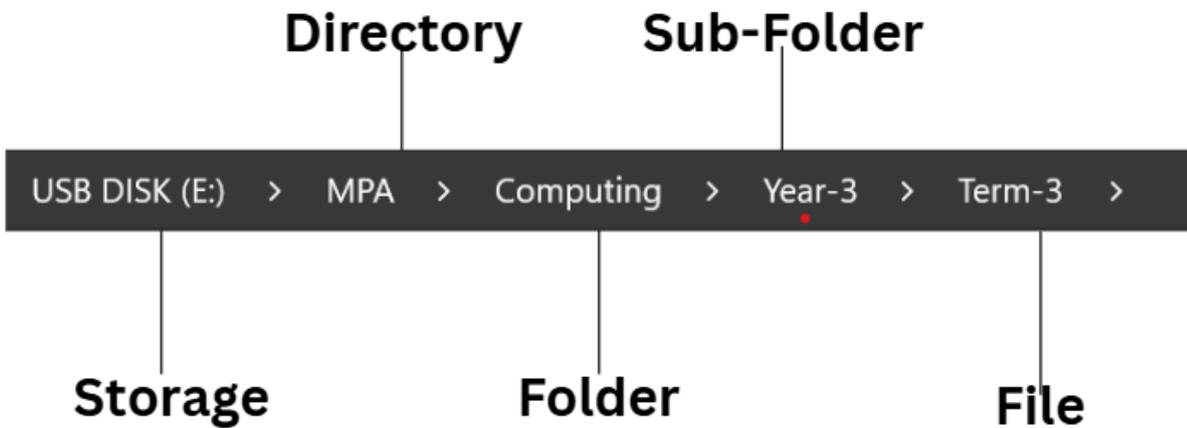
Sub-folders



Files

File name must be a **sensible name** which describe the file.

For Example- Science_Project_Term1



Files and folder have address called **file path**

The picture above is described the file path.

Online and offline storage

(1) Standalone Storage

Hard Drive

(2) Local Network Storage

(3) Cloud Storage

Standalone Storage (Hard Drive)

Secure

Don't need internet

Difficult to share

If Computers broke, you will lose files



Local Network Storage

Secure

Can use the file on any device

Don't need internet

Easy to share

If the network fail, you can't access



Cloud Storage

Access the files anywhere with internet

Easy to share

Can backed up the files

Need internet

Can be hack or steal password.



Keeping the data safe

Username- a name to log on computer

Password- a secret phrase

To make the secure password, choose to your favorite phrase and take the first letter of each word in the phrase

For example (Phrase)-I can eat three pizzas!

ice3p!



Biometric mean- fingerprint sensor, facial recognition

PIN- Personal Identification Number

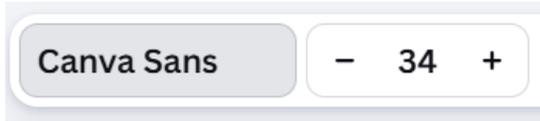
For example- 759430

Formatting text

Font Size and Style

Font- **the style or design** of the letters

Font Size- can adjust **big or small the letters**



Bold (B)- This makes words **darker** to stand out.

Underline (U)- This puts a line under the letters.

Italic - I - This Makes words slant to the right

Bullet points  - This is small shapes or icons before words.

Numbered List  - This puts numbers before the words in a list

Alignment  -Moving text to left, center, or right

We call pages into **slide** in presentation.

Animation – This controls how objects **appear, move and disappear.**

Online Safety Tips and making comic book



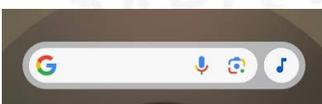
Google Chrome is a **web browser.**



Google search is a **search engine.**



Google map is used to **find the places and get directions.**



Search bar

Online Safety Tips

- Don't share your **personal information** (your home address, school address and your phone number)
- Don't share **your password** with anyone.
- Don't share **your pictures** to the strangers.
- Don't **download** anything without adult's permission.
- **Tell to trusted adult** if someone sent you **mean or strange message**.

Making comic online (Signs and icons for making document)



Move



Rotate



Delete

Add a heading

Add a subheading

Add a little bit of body text

Text boxes



Speech Bubble



Resize