

What is python?

Python is a cool and easy-to-learn programming language. You can use it to make games, apps, websites, and more. It's great for beginners because it looks like normal English. If you're into tech or coding, Python is an awesome way to start creating your own stuff!

What are the two different types of loop?

A for loop in Python Turtle repeats a set of commands a specific number of times. You use it to make the turtle draw shapes or patterns easily. For example, to draw a square, you tell the turtle to move and turn four times using a for loop. It's super handy!

A while loop in Python Turtle keeps repeating commands as long as a condition is true. It's like telling the turtle to keep moving until it hits a wall. You can use it to create cool patterns and animations by having the turtle repeat actions based on certain rules.

What is selection?

Selection in Python Turtle means making choices in your code. You use "if" statements to decide what happens based on conditions. For example, you can tell the turtle to move left if a number is less than 5. It helps your programs do different things in different situations.

What are the three different command words for selection and what is their purpose?

The three command words for selection in Python are "if", "elif", and "else". "If" checks a condition, "elif" (else if) checks another condition if the first isn't true, and "else" runs code if none of the previous conditions are met. They help your program make decisions.

What are the common syntax errors that are made when writing in python?

Common syntax errors in Python include missing colons after "if", "elif", and "else", forgetting to indent code blocks, using the wrong type of quotes, and misspelling keywords or variable names. These mistakes can stop your code from running, so it's important to check your work carefully.



What is a function?

A function in Python Turtle is like a mini-program you create to do a specific job. You write it once and can use it anytime you want. For example, you can make a function to draw a star and then use it whenever you need a star in your drawing.

Why is a function more efficient than not using one?

A function is more efficient in Python Turtle because it saves you time and effort. Instead of writing the same code over and over, you write it once as a function and then call it whenever needed. This makes your code cleaner, faster, and easier to read and change.

What syntax would I use to keep the turtle window open?

To keep the turtle window open, you use `turtle.done()`. At the end of your code, just write `turtle.done()` and the window will stay open until you close it yourself. This way, you can see all your drawings without the window closing automatically.

How would I create a new turtle?

```
< > main.py
1 import turtle
2 t=turtle.Turtle()
```

How could I draw a square in turtle?

```
< > main.py
1 import turtle
2 t=turtle.Turtle()
3 t.fillcolor("pink")
4 t.begin_fill()
5
6 t.forward(100)
7 t.right(90)
8 t.forward(100)
9 t.right(90)
10 t.forward(100)
11 t.right(90)
12 t.forward(100)
13 t.right(90)
14 t.end_fill()
```

What is turtle?

Which section of code allows you to change the colour of the turtles work?

```
< > main.py
1 import turtle
2 t=turtle.Turtle()
3 t.pencolour("blue")
```

```
< > main.py
1 import turtle
2 t=turtle.Turtle()
3 t.fillcolor("pink")
4 t.begin_fill()
5
6 t.forward(100)
7 t.right(90)
8 t.forward(100)
9 t.right(90)
10 t.forward(100)
11 t.right(90)
12 t.forward(100)
13 t.right(90)
14 t.end_fill()
```

What is Data?

In common usage and statistics, data is a collection of discrete or continuous values that convey information, describing the quantity, quality, fact, statistics, other basic units of meaning, or simply sequences of symbols that may be further interpreted formally.

What is information?

Information is an abstract concept that refers to that which has the power to inform. At the most fundamental level, information pertains to the interpretation of that which may be sensed, or their abstractions.

What is data theft?

Data theft is a growing phenomenon primarily caused by system administrators and office workers with access to technology such as database servers, desktop computers and a growing list of hand-held devices capable of storing digital information, such as USB flash drives, iPods and even digital cameras.

What is personal information?

Personal data, also known as personal information or personally identifiable information, is any information related to an identifiable person.

What is the Data Protection Act 2018?

All organisations and people using and storing personal data must abide by the following principles.



Used fairly, openly, and in accordance with the law



Used for a specific and stated reason



Used only in a way that is necessary and sufficient for the purpose for which it was collected



Accurate and up-to-date



Only kept for as long as it is needed



Protected against loss, damage, and unauthorised access

As a **data subject**, you have the right to find out what information the government and other

organisations store about you.



Find out how your data is being used (by an organisation)



Access the data that an organisation has about you



Update your data



Have your data deleted



Stop an organisation from processing your data



Transfer your data to a different organisation

What is a hacktivist?

Hacktivists are rarely motivated by theft, but are more interested in creating disruption to cause public embarrassment or to promote a cause.

What is a Denial of service attack (Dos)?

This is a cyberattack in which the criminal makes a network resource unavailable to its intended users.

What is a Distributed denial of service attack (DDos)?

This is DoS but attacks different computers at the same time.

What is the difference between the following hackers?

Black Hat?

Black hat hackers gain unauthorised access to harm operations or gain sensitive data. It is always illegal.

White hat?

White hat hackers do not intend to harm a system. They look for weaknesses. This can be known as ethical hacking and is NOT illegal. You can get a job as an ethical hacker

Grey Hat?

Grey Hat hackers act without malicious intent but for their fun, they exploit a security weakness in a computer system or network without the owner's permission or knowledge.



What is Malware?

Malware (malicious software) is software that is designed to gain access to your computer with malicious intent.

Briefly explain the following categories of malware?

Viruses

Viruses are a malicious form of self-replicating software.

Trojans

It's like a game used to steal your information.

Adware

Can be a worm virus or trojan and makes a pop up advert come up.

Worms

Worms replicate themselves but do not attach themselves to files as a virus does.

Spyware

Unwanted software which monitors what you do on your computer.

Ransomware

Encrypts your computer. This is a form of virus, as it is self-replicating.

What offences does each of the three sections of the Computer Misuse Act 1990 introduce ?

Section 1

- Unauthorised access to computer material

Section 2

- Unauthorised access with intent to commit or facilitate the commission of further offences

Section 3

- Unauthorised acts with intent to impair, or with recklessness as to impairing, the operation of a computer



What is a client brief?

A client brief is a vital document in agency project management, serving as a foundational guide for the entire project. It outlines the client's objectives, expectations, target audience, budget, timeline, and any specific requirements or constraints that must be considered during project development.

Who is the target audience and why it is it important to ensure these are considered?

A target audience is the group of people who will be using the document or digital product that is created. These are the people who you are trying to reach and attract. I.e. If you were creating a poster for an upcoming event, the target audience are the people who you want to see the poster, and who you want to capture to make them stop and read or look for further information.

What are the key client requirements for Ro_Dog?

- It must be based on a MMA trained sausage dog called Rolo
- It must be set in an urban environment / New York
- It must include a front cover, back cover and spine
- The dimensions must be 129 mm wide (5 inches), 129 mm high (5 inches) and a spine that is 15mm (0.6 inches)

Briefly explain what the following planning documents are used for

Mind Map

A collection of ideas shown which expand and develop on their story

Moodboard

A collection of images which gives a mood or a feel of a product

Storyboard

Step by step information about what is happening in an animated/moving scene

Visualisation Diagram

A mockup design of what a final product will look like, including layouts, where images will be placed, colours, dimensions and annotations for the design decisions.

Why are assets important in a graphic?

Assets play a big part of the product to ensure it is high quality and meets both the clients requirements and target audience needs to appeal to everyone and become a successful design

What are the following?

Vector images

Image made up of mathematical lines, which remain crisp and clear

Raster images

Image made up of pixels which can become blurry if enlarged

How does copyright affect an asset?

Copyrighted assets may mean they cannot be used without permission from the original owner. Without this permission it may be illegal to use the asset and if so could result in a fine.

Explain briefly how effective the following assets are (These can be pro's or cons or a mixture of both)



A poster advertising a gardner

The poster uses many similar shades of green which makes it hard to read at times and potentially miss the target audiences attention.



A poster advertising an event

This poster has lots of overlapping images and text information, making it hard to see the purpose and what the poster is trying to communicate



An infographic for a social media company

Consistent colours are used and the image is clear and shows clearly the intentions by using images linked.

What is the correct formula for making the following calculations using a spreadsheet?

Adding Cell A3 and B3 together	
Multiplying Cell A3 by B3	
Dividing Cell A3 by Cell B3	
Adding Cell C1, C3, C4 and C7 together	
Subtracting Cell A6 from A7	

What is the name for a preset formula in Excel and what do they do?

Explain what the following terms do in a spreadsheet

SUM	
MIN	
MAX	
COUNTA	
AVERAGE	
COUNTIF	
IF	

What types of charts can be created using spreadsheets?