

Subject: Computing

Topic: Python

Summary of key information:

•What is Python?

- Python is a programming language that allows you to create programs. Python is an easy to learn programming language, which makes it perfect to use when first learning how to program.
- Learning to program takes time and lots of practice, but should be fun. There are many programming languages. Python was designed specifically to be easy to understand and quick to build programs with. It is used in real world companies, such as Google.
- You can download and install Python at home, it's free!

•Python IDLE

- IDLE is an integrated development environment for Python. Programmers don't have to work with IDLE, but we will. Once inside the IDLE shell, select File and New Window to open the text editor.
- To run your code select Run > Run Module or just hit F5. You will be prompted to save your programming code if you have made changes before it will run. The output from your program will appear in the Python shell.

Key terms: IDE, Library, Shell, IDLE, Loop, Iteration, Variable, Identifier

Homework this half term - to help prepare for your end of half term multiple choice quiz.

How do I use this to help me revise? Guidance and advice on how to use your knowledge organiser!



Summary of key information:

KEYWORDS	
Word	Meaning/Description
Python	Python is a text based programming language that allows you to create programs and applications.
Variable	Variables are containers for storing data.
Comments	Programmers used comments to help explain the code. The symbol for comments is #
For loop	A for loop is used to repeatedly execute a set of statements until the end of sequence is reached.
If statement	If statements are used for decision making programs. An if statement will run the code only when the IF condition is true.
Logic errors	Logic Errors occur when the program runs without crashing, but produces an incorrect result. The error is caused by a mistake in the program's logic.
Run time error	It is an error that occurs when the wrong data type is used in a program.

For Loops

A For loop looks as follows:

number is a variable used to count.

range is a function which sets the upper and lower limits; for instance range (10) would count from 0 to 9.

```
for number in range(10):
    print(number)
```

RULES FOR VARIABLES

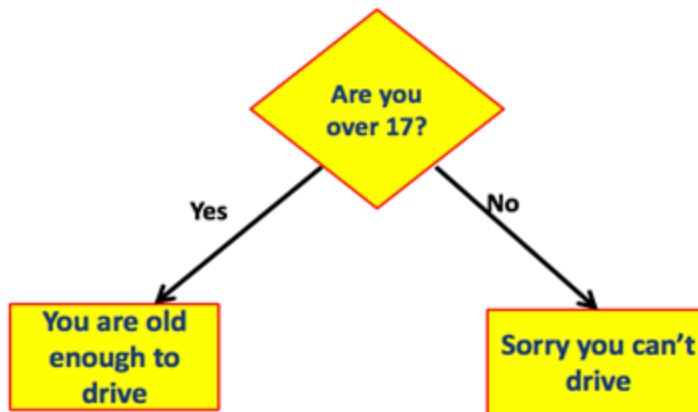
Give your variable a sensible name so it is easy to remember

Keep your variable names short

Use two words together with no spaces e.g. FirstName

Begin variable names with a letter or underscore “_”

If statements decision tree



Python Operators

OPERATORS	DESCRIPTION
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to
==	Equal to
!=	Not equal to