Problem solving with Python

Python is a **text** based **programming language**. That can be used to create programs, games, applications and much more!

A **program** is a set of precise instructions, expressed in a **programming language**. **Translating** the programming language is necessary for a machine to be able to **execute** the instructions.

To execute a Python program, you need a **Python interpreter**.

This is a program that translates and executes your Python program.

Syntax Errors
All programming languages have rules for **syntax**, i.e. how statements can be assembled.
Programs written in a programming language must follow its syntax.
Programs with **syntax errors** cannot be translated and executed.

You can use multiple branches using if, elif and else

Python helps by telling the   programmer where the error is.   So if you see red error text—read it first.
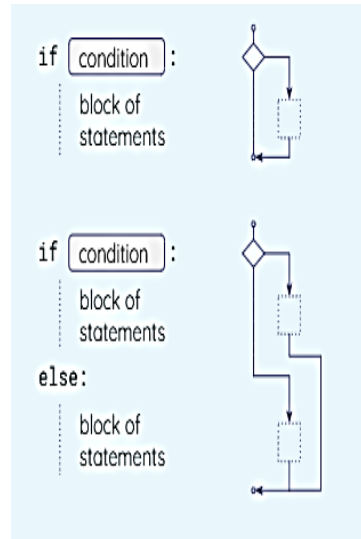
Useful snippets of code	
print ("Year 8")	Will display the string "Year 8"
input ()	Reads a line of text from the keyboard and returns it
variable name = expression	Allows an expression to be assigned to a variable. E.g. year=1944
Name=[item1, item2, item3]	Allows ctreation of a list e.g. shopping = ["oranges", "apples", pears"]

Data types
Whole numbers—**integer**

Yes/no or True/False—**boolean**

Letters, combination of letters, numbers—**string**

Arithmetic operators
+ addition
- difference
* multiplication
/ division
// integer division
% remainder of integer division
** exponentiation (to the power of)

Some common syntax errors in selection
•use if and else—no capitals
•A colon : is always required after thecondition and after else.
•Use **indentation** to indicate which statements 'belong' to the if block and the else block.
•The == operator checks for equality.
•A single = is only used in assignments