Introduction to Python

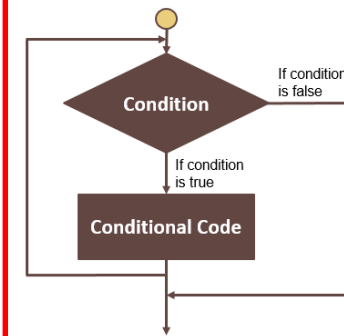| Keyword	Definition
Bug	An error in a computer program
De-bugging	Fixing the errors in a computer program
Variable	Location in memory where you can temporarily store text or numbers
Function	Pre-defined code that does a specific job
Data Type	The type of data a variable contains
Casting	Defining a data type
Selection	A choice in the program
Pseudocode	Planning code, half code, half English with no real syntax
Comments	Added to the program to help you understand what is happening in the program code

Using variables functions and comments

```
#firstname is a variable

print ("What is your name?")

firstname = input()

print ("Hello,",firstname)
```

```
7⁴                              Python 3.3.2 Shell
File  Edit  Shell  Debug  Options  Windows  Help
>>>
What is your name?
Harry
Hello, Harry
>>> |
```

Comments appear in RED and have a preceding # symbol.

Functions appear in purple, print () and input () are functions

WHILE loop

ELIF Statement

```
if grade >= 80:
    print("Distinction")
elif grade >= 70:
    print("Merit")
elif grade >= 60:
    print("Pass")
else:
    print("Fail")
```

IF gives you two options.

ELIF stands for Else If and gives you more options.

You can use ELIF as many times as you like.

Data types

String – holds alphanumeric data as text

Integer – hold whole numbers

Float – holds numbers with a decimal point

Boolean – holds either 'True' or 'False'

Casting

str(username)

int(age)

float(price)

bool(answer)

Arithmetic Operators

Arithmetic	Operator	Example	Output
Addition	+	2 + 10	12
Subtraction	-	9 – 6	3
Multiplication	*	5 * 4	20
Division	/	5 / 2	2.5
Floor Division	//	7 // 2	3
Remainder	%	7 % 3	1

Comparison Operators

Operator	Meaning	Example	Evaluates to
==	equal to	7==7	True
!=	not equal to	6!=7	True
>	Greater than	7>6	True
<	Less than	5<8	True
>=	Greater than or equal to	6>=8	False
<=	Less than or equal to	7<=7	True

Types of Errors/Bugs

Syntax Error – breaks the rules of the programming language

Logic Error – code will run, but will not work as the programmer expects