**Basic Concepts in Python**

* Print(‘x’) =x
* Print (x + y) =x+y
* \* =multiply ; / = divide
* Last line off error tells type of error
* Floats represent numbers that are not integers e.g.; 0.5 ,5.6667
* \*\* = power of e.g. print (2\*\*5) =32
* /does division
* //= gives only integral part of quotient
* % = gives only remainder
* To write a text strings are used -created by entering text ““or ‘‘
* In Python, comments begin with a #. This statement is ignored by the interpreter and serves as documentation for our code.
* \ used to enter “or‘ in sentences
* \n represents new line but can also be done if put3”
* Can add 2 strings in same way like numbers and the string can repeat n times by multiplying
* Del can be used to delete a variable
* When there is () after a variable it is considered as function
* To ask client or user to put value we use input as variable

X= input ()

Print (X)

* Inputs are added as strings to make them integers we can put int (input ()) and str (input ()) to make it to sting.
* In place operators allows to write x=x+3 as x+=3 it can be used for strings and integers for all 4 operations

BOOLEAN And Comparison

* 2 values true and false can be used by putting 2= to compare <>or <=, >= are used
* ! = acts like not gate it reverses the result

If statements

* These are used to only print certain condition
* It is used as if (): print () and colon is mandatory at end of if statements
* If the condition is true it is shown if it is false it is neglected

Else statements

* These are opposite to if statements as if is shown when condition is true else can be shown if it is false
* Only one else can be used with an if to keep going we need to write else if to continue the chain
* Instead elif a shortcut is used to shorten the code and after every else a: must be use

Boolean Logic

* It is nothing but logic gates in physics but here it is written using if and else statements
* To check both ‘and’ is used to check any one ‘or’ is used and not is used to reverse the result
* E.g. print (3>2) and (1+2==3): similarly, ‘or’ and ‘not’ are used
* Operator Precedence is like bodmas rule in math different sign has different preferences.
* Note to self: - if there are no brackets then I must see the code carefully

ASCII Value (2 functions)

* ord() it converts letter to number
* chr() it coverts number to letter

Decimal places (a)=float(input())

print("%.2f"%a)

a=b.lower()

python has 4 data types lists, tuples, dictionary, and set

Lists

* These are used to make lists it is created by putting values in square bracket after each value a comma must be used
* A number string or a variable can also be accessed in lists
* **E.G.** words= [h, i, j, k, l, m]

Print ([0]) where o is the first term of the set

* A subset can also be added in the main set.
* To change one term to another or to add a particular term list operation are used

**E.G**. from above list to change first term we can write print ([0]) =A

* Using same code, we can add new elements to the list
* To add a particular element at the end of the list append function is used words. append(n) adds n in above example
* To print the number of elements len function is used its command is print(len(words))
* To insert a new element at a particular position, insert function is used if we write words. Insert (2, d) d will be inserted in the second place of the above list