POORNIMA

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Assignment-2

* Scope of variable :-

→ In python variables are the containers for storing data values.

→ We do not need to declare variables before using them or declare their type.

→ A variable is created the moment we first assign a value to it.

→ The location where we can find a variable and also access it if required is called the scope of a variable.

* local variable -

→ local variables are those that are initialized within a function & are unique to that function.

→ It can't accessed outside of the function.

Eg- def fun( ): // function → function name
    # local variable
    a = "chirag"
    print(a)
fun( ) // function Call

O/P - chirag

* Global variable :-

→ Global variables are the ones that are defined and declared outside any function & are not specified to any function.

→ They can be used by any part of the program.

Ex: def fun(): → // function name
    print(a)
# Global scope
a = "chirag"
fun() // Function Call

O/P → chirag

* Operator Precedence & Associativity :-

Precedence	Operators	Description	Associativity
1	()	Parentheses	L→R
2	x[index], x[index:index]	Subscription, slicing	L→R
3	await x	Await expression	NA
4	**	Exponentiation	R→L
5	+, -, ~	Positive, negative, bitwise NOT	R→L

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6	*, @, /, //, %	Multiplication, matrix, division, floor division, remainder	L→R
7	+, -	Addition & Subtraction	L→R
8	<<, >>	shifts	L→R
9	&	Bitwise AND	L→R
10	^	Bitwise XOR	L→R

* UTF-8 :-
→ Basic ASCII characters like digits, latin characters with no accents, etc. occupy one byte which is identical to US-ASCII representation.
→ This will all US-ASCII strings become valid UTF-8 which provides decent backwards compatability in many cases.
→ No null byte, which allows to use null-terminated strings, this introduces a great deal of backwards compatability too.
→ UTF-8 is independent of byte order, so you don't have to worry about Big Endian/Little Endian issue.

* UTF-16 :-

→ BMP (Basic multilingual plane) characters, latin, Cyrillic, most Chinese (the PRC made support for some codepoints outside BMP mandatory), most Japanese can be represented with 2 bytes.

→ This speeds up indexing & calculating codepoint count in case the text does not contain suplementary characters.

→ Even if the text has supplementary characters, they are still represented by pairs of 16-bit values, which means that the total length is still divisible by two & allows to use 16-bit char as the primitive component of the string.

[4]
```
#WAP to find out whether a number is positive negative or neutral.
x=int(input("Enter value of x:"))
if(x>0):
  print("Number is positive")
elif(x<0):
  print("Number is negative")
else:
  print("Number is zero")
```

```
Enter value of x:0
Number is zero
```

```
#WAP to find out all the odd numbers
a=int(input("Enter value of a:"))
if(a%2==0):
  print("Number is even")
else:
  print("number is odd")
```

```
Enter value of a:7
number is odd
```

```
#WAP to take 5 int input from a user and find out its average
a=int(input("enter value of a:"))
b=int(input("enter value of b:"))
c=int(input("enter value of c:"))
d=int(input("enter value of d:"))
e=int(input("enter value of e:"))
print("Average is:",(a+b+c+d+e)/5)
```

```
enter value of a:4
enter value of b:5
enter value of c:7
enter value of d:8
enter value of e:9
Average is: 6.6
```

+ Code + Text

```
[9] #WAP to take a float input from a user in terms of weight(kg) and convert it into pound.
x=float(input("enter weight in kg:"))
y=0.45359237
lb=x/y
print(lb)
```

```
enter weight in kg:78
171.9605645042045
```

```
[13] #WAP to take a float input from a user in terms of height(feet & inches)(5.4).
     #if user enter 1 then print height into inches.
     #if user enter 2 then we have to print height in centimeters.
     #if user enter 3 then print height into meters.
     ch=int(input("enter your choice:"))
     x=float(input("enter height:"))
     if(ch==1):
       inch=(x*12)
       print("Height in inches is:",inch)
     elif(ch==2):
       centimeter=(x*12)*2.54
       print("Height in cm is:",centimeter)
     elif(ch==3):
       meter=(x*0.3048)
       print("Height in meter is:",meter)
```

```
enter your choice:3
enter height:6.2
Height in meter is: 1.88976
```