day-2

October 4, 2024

[4]:
```
2*8
```

[4]:
```
16
```

[5]:
```
first_number = int(input("enter the first number"))
second_number = int(input("enter second number"))
print(first_number)
print(second_number)
result = first_number + second_number
print(result)
```

```
enter the first number55
enter second number10
55
10
65
```

[7]:
```
a=False
type(a)
```

[7]:
```
bool
```

[8]:
```
4 + 5.5
```

[8]:
```
9.5
```

[9]:
```
5 +6 + 7j
```

[9]:
```
(11+7j)
```

[11]:
```
int('10')
```

[11]:
```
10
```

[12]:
```
str(5.6)
```

[12]:
```
'5.6'
```

[15]:
```
bool(1)
```

[15]:
```
True
```

[13]:
```
complex(4)
```

[13]:
```
(4+0j)
```

[16]:
```
list('Hellos')
```

[16]:
```
['H', 'e', 'l', 'l', 'o', 's']
```

[17]:
```
#safdar
print("Dr Safdar khan")
```

```
Dr Safdar khan
```

[18]:
```
a=100
b=0b1010
c=0o310
d=0x12c
print(a,b,c,d)
```

```
100 10 200 300
```

Explanation: a = 100:

a is assigned the value 100 in decimal format (base 10). b = 0b1010:

b is assigned a value in binary format (base 2). 0b is a prefix that indicates the number is in binary. 1010 in binary is equivalent to 10 in decimal. c = 0o310:

c is assigned a value in octal format (base 8). 0o is a prefix that indicates the number is in octal. 310 in octal is equivalent to 200 in decimal. d = 0x12c:

d is assigned a value in hexadecimal format (base 16). 0x is a prefix that indicates the number is in hexadecimal. 12c in hexadecimal is equivalent to 300 in decimal. When you print these values, they are all converted to their decimal equivalents:

a remains 100. b becomes 10. c becomes 200. d becomes 300. So the output is 100 10 200 300.

[19]:
```
float_1 =10.5
float_2 = 1.5e-3
float_2
```

[19]:
```
0.0015
```

Explanation: float_1 = 10.5:

float_1 is assigned the value 10.5. This is a standard floating-point number in decimal format. float_2 = 1.5e-3:

float_2 is assigned the value 1.5e-3. The notation 1.5e-3 is a scientific notation, which represents 1.51 0 − 3 1.5×10 −3 . Understanding float_2: 1.5e-3 means 1.5 multiplied by 1 0 − 3 10 −3 . 1 0 − 3 10 −3 is equal to 0.001. So, 1.5e-3 is equivalent to 1.5 × 0.001 1.5×0.001, which is 0.0015. Thus, the value of float_2 is 0.0015. When you print float_2, it will display:

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[20]:
```
x = 8+5 + 3.14j
print(x,x.imag,x.real)
```

```
(13+3.14j) 3.14 13.0
```

Explanation: x = 3.14j:

x is assigned the value 3.14j. In Python, the j suffix is used to represent the imaginary part of a complex number. So, x is a complex number with an imaginary part 3.14 and a real part 0. print(x, x.imag, x.real):

x.imag: This retrieves the imaginary part of the complex number x. For x = 3.14j, x.imag is 3.14. x.real: This retrieves the real part of the complex number x. For x = 3.14j, x.real is 0.0.

[22]:
```
number = int(input("enter any number"))
i=1
while i<15:
    print(number * i)
    i += 1
print("Table")
```

```
enter any number10
10
20
30
40
50
60
70
80
90
100
110
120
130
```

```
140
Table
```

Explanation: number = int(input("enter any number")):

This line prompts the user to enter a number. input("enter any number") takes input from the user as a string. int() converts the input string to an integer. The entered number is stored in the variable number. i = 1:

This initializes the variable i with the value 1. i will be used as a counter in the while loop. while i < 15::

This starts a while loop that will run as long as i is less than 15. The loop will iterate, multiplying number by i and printing the result. print(number * i):

In each iteration of the loop, this line prints the product of number and i. The result is the multiplication of number with the current value of i. i += 1:

This increments the value of i by 1 after each iteration. This ensures that i will eventually reach 15, at which point the loop will stop. How It Works: The loop starts with i = 1 and multiplies the user-provided number by i, printing the result. After each print, i is increased by 1. The loop continues until i reaches 15.

[23]:
```
number = int(input("enter any number"))
i=1
while i<15:
    print(number, '*',i,"=", number*i)
    i += 1
```

```
enter any number7
7 * 1 = 7
7 * 2 = 14
7 * 3 = 21
7 * 4 = 28
7 * 5 = 35
7 * 6 = 42
7 * 7 = 49
7 * 8 = 56
7 * 9 = 63
7 * 10 = 70
7 * 11 = 77
7 * 12 = 84
7 * 13 = 91
7 * 14 = 98
```

[25]:
```
import random
random.randint(1,100)
```

[25]: 31

Explanation: import random:

This line imports Python's built-in random module, which provides functions for generating random numbers. random.randint(1, 100):

randint() is a function from the random module. It generates a random integer between the two arguments provided: 1 and 100. The function is inclusive of both the start and end values, meaning the random integer can be any value from 1 to 100, including both 1 and 100. How It Works: Every time random.randint(1, 100) is called, it will return a different integer randomly chosen within the range [1, 100].

Example: If you run this code multiple times, you might get different outputs like:

42 7 99 Each of these numbers falls within the specified range.

[26]:
```
jackpot = random.randint(1,100)
guess = int(input("chalo guess kare"))
counter=1
while guess != jackpot:
    if guess < jackpot:
        print("guess higher")
    else:
        print("Guess lower")
    guess = int(input("chalo guess karo"))
    counter +=1
print("sahi jawab")
print("you took",counter,"attempt")
```

```
chalo guess kare20
Guess lower
chalo guess karo15
Guess lower
chalo guess karo10
Guess lower
chalo guess karo5
Guess lower
chalo guess karo1
guess higher
chalo guess karo3
sahi jawab
you took 6 attempt
```

[27]:
```
range(1,11,5)
```

[27]:
```
range(1, 11, 5)
```

[28]:
```
for i in range(1,50,2):
    print(i)
```

```
1
3
5
```

```
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
49
```

[29]:
```
for i in 'kolkata':
    print(i)
```

```
k
o
l
k
a
t
a
```

[30]:
```
for i in {1,2,3,4,3,2,5,6,}:
    print(i)
```

```
1
2
3
4
5
6
```

[107]:
```
row = int(input("enter the number of row"))
for i in range(1, row+1):
    for j in range(0,i):
        print("*",end="")
```

```
    print("")
```

```
enter the number of row10
*
**
***
****
*****
******
*******
********
*********
**********
```

[109]:
```
for i in range(1,11):
    if i==7:
        break
    print(i)
```

```
1
2
3
4
5
6
```

[110]:
```
for i in range(1,11):
    if i==5:
        continue
    print(i)
```

```
1
2
3
4
6
7
8
9
10
```

[121]:
```
for i in range(1,11):
    pass
```

[113]:
```
0==False
```

[113]: True

[119]:
```
x= True + 10
x
```

[119]: 11

[ ]:
```

```