28-oct

- Generally if you observe any application
- User will provided the values
- backend some programming language will work
- if any code the values we are give is called **Hard code**
- always the code should be generic
- In python the user can provide the values from keyboard using **Input**

In [1]:
```
input()
```

Out[1]: 'print'

In [2]:
```
input()
```

Out[2]: 'python'

In [3]:
```
input(10)
```

Out[3]: '45'

In [4]:
```
input('enter a number 1:- ')
```

Out[4]: 'p23'

In [5]:
```
input('enter your name:- ')
input('Enter age:- ')
input('enter city:- ')
```

Out[5]: 'Pune'

In [6]:
```
a = 10
b = 20
a+b
```

Out[6]: 30

- **above is hard coding**

In [7]:
```
a = input('Enter value1:- ')
b = input('Enter Value2:- ')
print(a+b)
```

```
4575
```

In [8]:
```
a = int(input('Enter a value1:- '))
b = int(input('Enter a value2:- '))
a+b
```

Out[8]: 530

Method-1

In [10]:
```
n1 = int(input('enter a number1:- '))
n2 = int(input("enter a number2:- "))
n1+n2
```

Out[10]: 57

Method-2

In [11]:
```
a = input('Enter a number:-')
b = input('Enter a number:-')
add = int(a)+int(b)
add
```

Out[11]: 123

In [12]:
```
int(input())
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
Cell In[12], line 1
----> 1 int(input())

ValueError: invalid literal for int() with base 10: '45.25'
```

In [1]:
```
n1 = float(input('enter n1: '))
n2 = float(input('enter n2: '))
n1+n2
```

Out[1]: 123.0

- If we can use float instead of int ans is yes we can
- but some answers requirement is the output come in the form of integer
- no need decimal point

eval

- Whenever we listen about eval it represents math term **evaluate**
- Instead of focus on int and float every time
- simply use **eval** conversion always
- if you apply eval it will convert the value based on base data type
- if user will provide the integer, it will convert into integer value
- if user will provide the float, it will convert into float value
- if user will provide the string, it will give the error

In [3]:
```
n1 = eval(input("enter a number:- "))
n2 = eval(input("enter a number:- "))

n1+n2
print(f"The addition of {n1} and {n2} is {n1+n2}")
```

```
The addition of 45 and 25.23 is 70.23
```

In [1]:
```
n1 = eval(input("enter num 1:- "))
n2 = eval(input("enter num 2:- "))
n3 = eval(input("enter num 3:- "))

avg = n1+n2+n3/3
print(f'The ave of {n1},{n2} and {n3} is {avg}')
```

```
The ave of 234,456 and 389 is 819.6666666666666
```

round

- It will take always nearest values

In [6]:
```
n1 = eval(input("enter num 1:- "))
n2 = eval(input("enter num 2:- "))
n3 = eval(input("enter num 3:- "))

avg1 = n1+n2+n3/3
avg = round(avg1,2)
print(f'The average of {n1},{n2} and {n3} is {avg}')
```

```
The average of 45,78 and 69 is 146.0
```

In [5]:
```
b = eval(input("Enter a breadth"))
h = eval(input("Enter a height"))
area1 = 0.5*b*h
area = round(area1,2)
print(f'the area of a circle is {area}')
```

```
the area of a circle is 3256.12
```

In [4]:
```
r = eval(input("Enter the radius"))
pi = 3.14
area1 = pi*r*r
area = round(area1,2)
print(f'The area of a circle is {area}')
```

```
The area of a circle is 627400.26
```

In [2]:
```
bill = eval(input("Enter a bill amount"))
tip = eval(input("Enter your tip amount"))

total_bill = bill+tip

total_bill
```

Out[2]: 440

In [ ]:
```
bill = eval(input("Enter a bill amount"))
tip = eval(input("Enter your tip amount"))

total_bill = bill+tip
```

```
total_bill
```

In [5]:
```
eval('10.5')
eval('10')

# eval will convert string values to numbers
# int()  float() eval()
```

Out[5]: 10

round

- It will take always nearest values

In [6]:
```
round(19.6)
```

Out[6]: 20

In [7]:
```
round(29.34333,2)
```

Out[7]: 29.34

In [9]:
```
round(23.4566666,4)
```

Out[9]: 23.4567

In [13]:
```
radius = eval(input("enter the radius"))
pi = 3.14

area1 = pi*radius*radius
area = round(area1,2)
print(f"the are of circle is: {area}")
```

```
the are of circle is: 6358.5
```

In [15]:
```
bill_amount = eval(input("Enter a bill amount:- "))
tip = eval(input("Enter a tip amount percentage"))

total_bill= (bill_amount*tip)/100+bill_amount
print(f"The total bill is {total_bill}")
```

```
The total bill is 1050.0
```

In [ ]:
```
father and son

son has written the exam
the results got out
father percentage of mars to the son
so son says dad i will give the marks
you calculate percentage
```

In [7]:
```
input("father:")
input("Beta:")
input("father:")
input("Beta:")
input("father:")
input("Beta:")
input('Father:')
```

```
input('son:')
eng = eval(input("english marks:"))
hindi = eval(input("Hindi marks:"))
maths = eval(input("maths marks:"))
history = eval(input("history marks:"))
science = eval(input("science marks:"))

percentage = (eng+hindi+maths+history+science)/500*100
print(f'The total percentage is: {percentage}')
```

```
The total percentage is: 74.0
```

In [ ]: