Illustrative Programs

Presented By

M.Malarmathi

AP/IT

Square root

```
n=int(input("enter the value of n:"))
x=(n/2.0)
while True:
    accuracy=(x+n/x)/2.0
    if abs(x-accuracy)<0.00001:
        print (accuracy)
        break
    x=accuracy
```

OUTPUT:

enter the value of n:25
5.0

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GCD

```python
def gcd(a,b):
  if(b==0):
      return a
   else:
      return gcd(b,a%b)
a=int(input("Enter first number:"))
b=int(input("Enter second number:"))
GCD=gcd(a,b)
print("GCD is: ")
print(GCD)
```

Case 1:

Enter first number:5

Enter second number:15

GCD is: 5

 Case 2:

Enter first number:30

Enter second number:12

GCD is: 6

Exponential

```python
def power(base,exp):
    if(exp==1):
        return(base)
    if(exp!=1):
        return(base*power(base,exp-1))
base=int(input("Enter base: "))
exp=int(input("Enter exponential value: "))
print("Result:",power(base,exp))
```

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OUTPUT

OUTPUT:

Case 1:

Enter base: 2

Enter exponential value: 5

Result: 32

Case 2:

Enter base: 5

Enter exponential value: 3

 Result: 125

Sum an array of n numbers

```
size=int(input("enter  the number of elements:"))
lst=[]
print("Enter the elements:")
for i in range (0, size):
    lst.append(int(input()))
print("the elements of the list are:",lst)
sum=0
for  i  in range (0, size):
    sum=sum+lst[i]
print("Sumis",sum )
```

Enter the number of elements:5

 Enter the elements:2

4

6

8

12

The elements of the list are: (2,4,6,8,12)

Sum is: 32

Thank You