In [2]:

```
#function to check if a number is even or odd
def check(a):
    if (a%2)==0 :
        print("given number is even")
    else:
        print("given number is odd")
x=int(input("enter number:"))
check(x)
```

```
enter number:6
given number is even
```

In [1]:

```
#find maximum of two numbers
def maximum(a,b):
    num=max(a,b)
    return num
a=int(input("enter 1st number:"))
b=int(input("enter 2nd number:"))
print("maximum number is")
maximum(a,b)
```

```
enter 1st number:22
enter 2nd number:63
maximum number is
```

Out[1]:

```
63
```

In [4]:

```
#function with keyword argument
def info(student,dept):
    print(student,"is in",dept,"department")
x=str(input("emter name:"))
y=str(input("enter dept:"))
info(dept=y,student=x)
```

```
emter name:ram
enter dept:computer
ram is in computer department
```

In [9]:

```
#function using default arguments
def my_func(country="india"):
    print("i am from ",country)
my_func("brazil")
my_func()
```

```
i am from  brazil
i am from  india
```

In [22]:

```
#function to find factorial of a number using recursion
def fact(n):
    if n==0 or n==1:
        return 1
    else:
        return (n*fact(n-1))
n=int(input("enter a number:"))
print("factorial of given number is:")
fact(n)
```

```
enter a number:4
factorial of given number is:
```

Out[22]:

```
24
```

In [13]:

```
#function to find the sum of the digits of the number recursively
def mysum(n):
    total=0
    while n>0:
        digit=n%10
        total=total+digit
        n=n//10
    return total
n=int(input("enter a number:"))
print("sum of digits is:")
mysum(n)
```

```
enter a number:56
sum of digits is:
```

Out[13]:

```
11
```

In [17]:

```
#function to check if a numberis prime or not
def check(n,m= None):
    if m is None:
        m=n-1
    while m>=2:
        if n%m==0:
            print("the number is not prime")
            return False
        else:
            return check(n,m-1)
    else:
        print("the number is prime")
        return True
n=int(input("enter the number:"))
check(n)
```

```
enter the number:5
the number is prime
```

Out[17]:

```
True
```

In [16]:

```
#function to find the power of a number using recursion
def power(a,b):
    if b!=0:
        return a* power(a,b-1)
    else:
        return 1
a=int(input("enter number:"))
b=int(input("enter power:"))
print(a,"to the",b,"is")
power(a,b)
```

```
enter number:5
enter power:3
5 to the 3 is
```

Out[16]:

```
125
```

In [20]:

```
#function to find the product of two numbers using recursion
def product(a,b):
    if a<b:
        return product(b,a)
    elif b!=0:
        return (a+product(a,b-1))
    else:
        return 0
x=int(input("enter 1st number:"))
y=int(input("enter 2nd number:"))
print("product of numbers is")
product(x,y)
```

```
enter 1st number:5
enter 2nd number:6
product of numbers is
```

Out[20]:

```
30
```

In [21]:

```
#function to find the product of two numbers using recursion
def product(a,b):
    if a<b:
        return product(b,a)
    elif b!=0:
        return (a+product(a,b-1))
    else:
        return 0
x=int(input("enter 1st number:"))
y=int(input("enter 2nd number:"))
print("product of numbers is")
product(x,y)
```

```
enter 1st number:5
enter 2nd number:3
product of numbers is
```

Out[21]:

```
15
```

In [ ]:

```

```

In [24]:

```
#function to check if a numberis prime or not
def check(n,m= None):
    if m is None:
        m=n-1
    while m>=2:
        if n%m==0:
            print("the number is not prime")
        else:
            return check(n,m-1)
    else:
        print("the number is prime")
n=int(input("enter the number:"))
check(n)
```

```
enter the number:5
the number is prime
```

In [ ]:

```

```