```
# Guessing number game
import random
r=random.randint(1,100)
c=0
print("guess a number between 1-100")
while(c<100):
    n=int(input())
    if(n==r):
        print("Congrats u won the game")
        break
    elif(n<r):
        print("ur number is less than actual number.... please try another nu
mber which is geater than",n)
        c=c+1
    elif(n>r):
        print("ur number is greater than actual number... please try another
number which is less than",n)
    c=c+1
print("The actual number is ",r)
print("The no.of attempts u made : ",c)
```

```
guess a number between 1-100
90
ur number is greater than actual number... please try another number which is
less than 90
85
ur number is greater than actual number... please try another number which is
less than 85
80
ur number is greater than actual number... please try another number which is
less than 80
75
ur number is greater than actual number... please try another number which is
less than 75
70
ur number is greater than actual number... please try another number which is
less than 70
65
ur number is greater than actual number... please try another number which is
less than 65
60
ur number is greater than actual number... please try another number which is
less than 60
55
```

```
ur number is greater than actual number... please try another number which is
less than 55
50
Congrats u won the game
The actual number is  50
The no.of attempts u made :  8
```

In [2]:

```
# Sum and product of digits of a number
def sumof_digit(n):
    s=0
    while(n!=0):
        r=n%10
        s=s+r
        n=n//10
    return s;
def productof_digit(n):
    p=1
    while(n!=0):
        r=n%10
        p=p*r
        n=n//10
    return p
n=int(input("Enter a number : "))
a,b=sumof_digit(n),productof_digit(n)
print("Sum of digits of the number is : ",a)
print("Product of digits of the number is : ",b)
```

```
Enter a number : 278
Sum of digits of the number is :  17
Product of digits of the number is :  112
```

In [3]:

```
#check whether entered string is palindrome or not
def palindrome(s):
    s1=s[::-1]
    if(s1==s):
        return "The entered string is palindrome"
    else:
        return "The entered string is not a palindrome"
s=input("Enter a string : ")
k=palindrome(s)
print(k)
```

```
Enter a string : madam
The entered string is palindrome
```

In [4]:

```
#finding factorial of a number
def factorial(n):
    f=1
    for i in range(n,1,-1):
        f=f*i
    return f
n=int(input("Enter a number : "))
k=factorial(n)
print("factorial of entered number is ",k)
```

```
Enter a number : 6
factorial of entered number is  720
```

In [5]:

```
# prime numbers
n=int(input("enter range : "))
a=[]
for i in range(2,n+1):
    c=0
    for j in range(1,i+1):
        if(i%j==0):
            c=c+1
    if(c==2):
        a.append(i)
for i in a:
    print(i,end=" ")
```

```
enter range : 20
2 3 5 7 11 13 17 19
```

In [ ]: