1. WAP to find factorial of a given num

```
n=int(input("Enter the num: "))
print("The factors of",n,"are")

def factorial(n):
    i=1
    while (i * i <= n):
        if n % i == 0:
            print(i)
            if i != n // i:
                print(n // i)
        i += 1
factorial(n)
```

2. WAP to check if a given number is prime or not

```
n=int(input("Enter the number: "))
if n<=0:
    print("Enter a positive number")
count=0
i=1
while (i*i<=n):
    if n%i==0:
        count+=1
        if i!=n//i:
            count+=1
    i+=1
if count==2:
    print(n,"is a prime number")
else:
    print(n,"is not prime")
```

3. WAP to print all the prime numbers in a given range

```
def prime(n):
    count=0
    i=1
    while (i*i<=n):
        if n%i==0:
            count+=1
            if i!=n//i:
                count+=1
        i+=1
    return count==2

start=int(input("Enter the start num: "))
end=int(input("Enter the end num: "))
if start>end:
    print("Invalid range")
else:
    print("Prime numbers")
    for n in range(start,end+1):
        flag=prime(n)
        if flag:
            print(n)
```

4. WAP to print all the prime and non-prime numbers in a given range

```
def prime(n):
    count=0
    i=1
    while (i*i<=n):
        if n%i==0:
            count+=1
            if i!=n//i:
                count+=1
        i+=1
    return count==2

start=int(input("Enter the start num: "))
end=int(input("Enter the end num: "))
if start>end:
    print("Invalid range")
else:
    print("Prime numbers")
    for n in range(start,end+1):
        flag=prime(n)
        if flag:
            print(n)
    print("Non Prime numbers")
    for n in range(start,end+1):
        flag=prime(n)
        if not flag:
            print(n)
```

5. WAP to print first n prime numbers

```
def prime(n):
    count=0
    i=1
    while (i*i<=n):
        if n%i==0:
            count+=1
            if i!=n//i:
                count+=1
        i+=1
    return count==2
n=int(input("Enter the value: "))
c=0
i=1
print("First ",n,"Prime numbers are")
while c<n:
    flag=prime(i)
    if flag:
        print(i)
        c+=1
    i+=1
```