

```
#Q1
num =int(input("Enter your number: "))
if num >0 :
    print("positive")
elif num<0 :
    print("negative")
else:
    print("zero")
```

Enter your number: -3  
negative

```
#Q2
num= int(input("Enter your number: "))
if num%2==0:
    print("even")
else:
    print("odd")
```

Enter your number: 4  
even

```
#Q3
age = int(input("Enter your age for voting: "))
if age >=18:
    print("eligible for voting")
else:
    print("not eligible for vote")
```

Enter your age for voting: 16  
not eligible for vote

```
#Q4
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))

if a > b:
    print("Largest number is:", a)
elif b > a:
    print("Largest number is:", b)
else:
    print("Both numbers are equal")
```

Enter first number: 5  
Enter second number: 7  
Largest number is: 7

```
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
c = int(input("Enter third number: "))

if a >= b and a >= c:
    print("Largest number is:", a)
elif b >= a and b >= c:
    print("Largest number is:", b)
else:
    print("Largest number is:", c)
```

Enter first number: 3  
Enter second number: 7  
Enter third number: 9  
Largest number is: 9

```
#Q7
year= int(input("enter the year: "))
if (year %4 == 0 ):
    print(year, "is a leap year")
else:
    print(year, "is not a leap year")
```

enter the year: 1900  
1900 is a leap year

```
#Q8
num= int(input("Enter the number: "))
```

```
if (num%5==0 and num%11==0):  
    print(num, "is divisible by 5 and 11")  
else:  
    print(num, "is not divisible by 5 and 11")
```

Enter the number: 5  
5 is not divisible by 5 and 11

```
#Q9  
grade= int(input("Enter the score: "))  
if grade>=90 :  
    print(" your score is A")  
elif grade>=75:  
    print(" your score is B")  
elif grade>=50:  
    print(" your score is C")  
else:  
    print(" you are fail")
```

Enter the score: 44  
you are fail

```
#Q11  
for i in range(1, 101):  
    if i % 3 == 0 and i % 5 != 0:  
        print(i, end=" ")
```

3 6 9 12 18 21 24 27 33 36 39 42 48 51 54 57 63 66 69 72 78 81 84 87 93 96 99

```
#Q12  
N = int(input("Enter a number: "))  
sum_even = 0  
  
for i in range(2, N+1, 2):  
    sum_even += i  
  
print("Sum of even numbers from 1 to", N, "is:", sum_even)
```

Enter a number: 4  
Sum of even numbers from 1 to 4 is: 6

```
#Q13  
N = int(input("Enter a number: "))  
sum_odd = 0  
  
for i in range(1, N+1, 2):  
    sum_odd += i  
  
print("Sum of odd numbers from 1 to", N, "is:", sum_odd)
```

Enter a number: 7  
Sum of odd numbers from 1 to 7 is: 16

```
#Q14  
num = int(input("Enter a number: "))  
  
for i in range(1, 11):  
    print(num, "x", i, "=", num * i)
```

Enter a number: 6  
6 x 1 = 6  
6 x 2 = 12  
6 x 3 = 18  
6 x 4 = 24  
6 x 5 = 30  
6 x 6 = 36  
6 x 7 = 42  
6 x 8 = 48  
6 x 9 = 54  
6 x 10 = 60

```
#Q15  
num = int(input("Enter a number: "))  
  
if num <= 1:
```

```
    print(num, "is not a prime number")
else:
    for i in range(2, int(num**0.5)+1):
        if num % i == 0:
            print(num, "is not a prime number")
            break
    else:
        print(num, "is a prime number")
```

Enter a number: 6  
6 is not a prime number

```
#Q16
n = int(input("Enter a number: "))
factorial = 1

for i in range(1, n+1):
    factorial *= i

print("Factorial of", n, "is:", factorial)
```

Enter a number: 7  
Factorial of 7 is: 5040

```
#Q17
num = int(input("Enter a number: "))
sum_digits = 0

while num > 0:
    sum_digits += num % 10
    num //= 10

print("Sum of digits is:", sum_digits)
```

Enter a number: 9  
Sum of digits is: 9

```
#Q18
num = int(input("Enter a number: "))
original = num
reverse = 0

while num > 0:
    reverse = reverse * 10 + num % 10
    num //= 10

if original == reverse:
    print(original, "is a palindrome")
else:
    print(original, "is not a palindrome")
```

Enter a number: 5  
5 is a palindrome

```
#Q19
num = int(input("Enter a number: "))
sum_digits = 0
temp = num
order = len(str(num))

while temp > 0:
    digit = temp % 10
    sum_digits += digit ** order
    temp //= 10

if num == sum_digits:
    print(num, "is an Armstrong number")
else:
    print(num, "is not an Armstrong number")
```

Enter a number: 153  
153 is an Armstrong number

```
#Q20
n = int(input("Enter number of terms: "))
a, b = 0, 1

for _ in range(n):
    print(a, end=" ")
    a, b = b, a + b
```

```
Enter number of terms: 11
0 1 1 2 3 5 8 13 21 34 55
```

```
#Q21
num = int(input("Enter a number: "))

for i in range(2, num + 1):
    if num % i == 0:
        print("Smallest divisor greater than 1 is:", i)
        break
```

```
Enter a number: 5
Smallest divisor greater than 1 is: 5
```

```
#Q22
num = input("Enter a number: ")
digit = input("Enter the digit to count: ")

count = num.count(digit)
print(f"The digit {digit} appears {count} times in {num}")
```

```
Enter a number: 74363649
Enter the digit to count: 3
The digit 3 appears 2 times in 74363649
```