1. **Check if a number is positive, negative, or zero**

```
number=int(input("Enter the number:"))
print("The number entered:",number)
if(number>0):
   print("This is positive number")
elif(number<0):
   print("This is negative number")
else:
   print("Zero")
```

output:
Enter the number:52
The number entered: 52
This is positive number

Enter the number:52
The number entered: 52
This is positive number

2. **Find the largest among three numbers**

```
a=int(input("Enter the number:"))
b=int(input("Enter the number"))
c=int(input("Enter the number"))
if(a>b and a>c):
   print("a is the largest number")
elif(b>c and b>a):
   print("b is the largest element")
else:
   print("c is the largest element")
```

output:
Enter the number:2
Enter the number31
Enter the number52
c is the largest element

Enter the number:42
Enter the number31
Enter the number27
a is the largest number

3.Check if a character is a vowel

```
char = input("Enter a character:").lower()
if char in ['a','e','i','o','u']:
   print(char,"is a vowel")
else:
```

```
    print("not a vowel")
```

output:

Enter a character:d

not a vowel

Enter a character:e

E is a vowel

4.Check whether a number is even and divisible by 5

```
num=int(input("Enter the number:"))
print("The number entered:",num)
if(num%2==0 and num%5==0):
    print(" number is both even and divisible by 5")
else:
    print("This number is not both even and divisible by 5")
```

output:

Enter the number:20

The number entered: 20

number is both even and divisible by 5

Enter the number:35

The number entered: 35

This number is not both even and divisible by 5

6. Student Grade Calculation

```
percentage=int(input("Enter the percentage:"))
print("The percentage entered:",percentage)
if(percentage>=90):
    print(" Grade A")
elif(percentage>=75):
```

```
    print("Grade B")
elif(percentage>=50):
    print("Grade C")
else:
    print("Fail")
```

output:

```
Enter the percentage:51
The percentage entered: 51
Grade C
Enter the percentage:78
The percentage entered: 78
Grade B
```

7. Check Login Credentials

```
username=input("Enter the username:")
print("The name entered:",username)
password=int(input("Enter the password:"))
print("The password entered:",password)
if(username=="admin" and password==1234):
    print("Login Successful")
else:
    print("Login Failed")
```

```
Enter the username:asmin
The name entered: asmin
Enter the password:1234
The password entered: 1234
Login Failed

Enter the username:asmin
The name entered: asmin
```

Enter the password:1234

The password entered: 1234

Login Failed

8. Simple Calculator

```
num1=float(input("Enter the value:"))
num2=float(input("Enter the value:"))
operator=input("Enter any operator:(+,-,*,/):")
if(operator == '+'):
   print(num1+num2)
elif(operator == '-'):
   print(num1-num2)
elif(operator == '*'):
   print(num1*num2)
elif(operator == '/'):
   print(num1/num2)
else:
   print("Invalid operator")
```

output:

Enter the value:45

Enter the value:5

Enter any operator:(+,-,*,/):*

225.0

Enter the value:100

Enter the value:50

Enter any operator:(+,-,*,/):+

150.0

9. Check if number is in a list

```
list = [42, 23, 31, 52, 71]
num = int(input("Enter a number: "))
```

```
if num in list:
    print("number in list")
else:
    print("not in list")
```

output:

Enter a number: 23

number in list

Enter a number: 34

not in list

. **Traffic Light Simulator**

```
color = input("Enter traffic light color: ").lower()
if color == "red":
    print("Stop")
elif color == "yellow":
    print("Get Ready")
elif color == "green":
    print("Go")
else:
    print("Invalid color")
```

output:

Enter traffic light color: red

Stop

Enter traffic light color: green

Go

11.Check if a number is within a range

```
num=int(input("enter a number:"))
if (10 <= num <= 50):
    print("This number lies between 10 to 50")
```

```
else:
   print("This number not in between 10 to 50")
```

output:

enter a number:43

This number lies between 10 to 50

enter a number:52

This number not in between 10 to 50

12.Determine age group

```
age=int(input("Enter the age:"))
if(age<=13):
   print("child")
elif(age>=19):
   print("Teen")
elif(age>=59):
   print("adult")
elif(age>=60):
   print("senior")
```

output:

Enter the age:9

Child

Enter the age:22

Teen

13. Compare two strings ignoring case

```
string1=input("enter first string:")
string2=input("enter second string:")
if string1.lower() == string2.lower():
   print("both strings are equal")
else:
   print("both strings are not equal")
```

output:

enter first string:hello

enter second string:HELLO

both strings are equal