

1.write a calculator program in python?

```
1 # Function to add two numbers
2 def add(num1, num2):
3     return num1 + num2
4 # Function to subtract two numbers
5 def subtract(num1, num2):
6     return num1 - num2
7 # Function to multiply two numbers
8 def multiply(num1, num2):
9     return num1 * num2
10 # Function to divide two numbers
11 def divide(num1, num2):
12     return num1 / num2
13 print("Please select operation -\n" \
14 "1. Add\n" \
15 "2. Subtract\n" \
16 "3. Multiply\n" \
17 "4. Divide\n")
18 # Take input from the user
19 select = int(input("Select operations form 1, 2, 3, 4 :"))
20 number_1 = int(input("Enter first number: "))
21 number_2 = int(input("Enter second number: "))
22 if select == 1:
23     print(number_1, "+", number_2, "=",
24           add(number_1, number_2))
25 elif select == 2:
26     print(number_1, "-", number_2, "=",
27           subtract(number_1, number_2))
28 elif select == 3:
29     print(number_1, "*", number_2, "=",
30           multiply(number_1, number_2))
31 elif select == 4:
32     print(number_1, "/", number_2, "=",
33           divide(number_1, number_2))
34 else:
35     print("Invalid input")
```

2.write a program to concatenate,reverse,and slice a string?

concatenation:

```
1 def reversed_string(text):
2     result = ""
3     for char in text:
4         result = char + result
5     return result
6 reversed_string("Hello, World!")
7 '!dlroW ,olleH'
```

Reverse:

```
1 def reversed_string(text):
2     result = ""
3     index = len(text) - 1
4     while index >= 0:
5         result += text[index]
6         index -= 1
7     return result
8 reversed_string("Hello, World!")
9 '!dlroW ,olleH'
```

slicing:

```
1 greeting = "Hello, World!"
2 for char in greeting[::-1]:
3     print(char)
4 !
5 d
6 l
7 r
8 o
9 W
10 ,
11 o
12 l
13 l
14 e
```

```
15 H
16 greeting[::-1]
17 '!dlrow ,olleH'
```

### 3.why is python a popular programming language?

It uses a simplified syntax with an emphasis on natural language, for a much easier learning curve for beginners. And, because Python is free to use and is supported by an extremely large ecosystem of libraries and packages, it's often the first choice language for new developers.

### 4.what are the other frameworks that can be used with python?

- Bottle.
- Flask.
- Django.
- Web2py.
- AIOHTTP.
- CherryPy.
- Dash.
- Falcon.

### 5.full form of WSGI?

The Web Server Gateway Interface (WSGI, pronounced whiskey or WIZ-ghee) is a simple calling convention for web servers to forward requests to web applications or frameworks written in the Python programming language. The current version of WSGI, version 1.0.