Question 1

Consider a list (list = []). You can perform the following commands:

insert i e: Insert integer at position .

print: Print the list.

remove e: Delete the first occurrence of integer .

append e: Insert integer at the end of the list.

sort: Sort the list.

pop: Pop the last element from the list.

reverse: Reverse the list.

Initialize your list and read in the value of followed by lines of commands where each command will be of the types listed above. Iterate through each command in order and perform the corresponding operation on your list.

Code 1

```
arr=list(map(int, input().split()))
print("Enter 'end' command after last input")
while(True):
   com=input()
   a=com.split()
   if a[0]=='insert':
      arr.insert(int(a[1]), int(a[2]))
   elif a[0]=='print':
      print(arr)
   elif a[0]=='remove':
      arr.remove(int(a[1]))
   elif a[0]=='append':
      arr.append(int(a[1]))
   elif a[0]=='sort':
      arr.sort()
   elif a[0]=='pop':
      arr.pop()
   elif a[0]=='reverse':
      arr.reverse()
   else:
      break
```

Output

```
8 2 3 7 5 1
Enter 'end' command after last input
insert 6 3
sort
pop
reverse
append 3
remove 2
pop
sort
end
print(arr)
[1, 3, 3, 5, 7]
```

Question 2
Write a Calculator program in Python?

Code 2
```python
def add(x, y):
    return x + y

def subtract(x, y):
    return x - y

def multiply(x, y):
    return x * y

def divide(x, y):
    return x / y

def calculator():
    print("Select operation.")
    print("1.Add")
    print("2.Subtract")
    print("3.Multiply")
    print("4.Divide")

    while True:
        choice = input("Enter choice(1/2/3/4): ")
        if choice in ('1', '2', '3', '4'):
```

```python
        num1 = float(input("Enter first number: "))
        num2 = float(input("Enter second number: "))
        if choice == '1':
            print(num1, "+", num2, "=", add(num1, num2))
        elif choice == '2':
            print(num1, "-", num2, "=", subtract(num1, num2))
        elif choice == '3':
            print(num1, "*", num2, "=", multiply(num1, num2))
        elif choice == '4':
            print(num1, "/", num2, "=", divide(num1, num2))
        next_calculation = input("Continue calculation(y/n): ")
        if next_calculation == "n":
         break
    else:
        print("Invalid Input")

calculator()
```

Output

```
========= RESTART: C:\Users\HP\OneDrive\[
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 1
Enter first number: 4
Enter second number: 5
4.0 + 5.0 = 9.0
Continue calculation(y/n): y
Enter choice(1/2/3/4): 3
Enter first number: 6
Enter second number: 8
6.0 * 8.0 = 48.0
Continue calculation(y/n): y
Enter choice(1/2/3/4): 2
Enter first number: 7
Enter second number: 4
7.0 - 4.0 = 3.0
Continue calculation(y/n): y
Enter choice(1/2/3/4): 8
Invalid Input
Enter choice(1/2/3/4): 2
Enter first number: 8
Enter second number: 2
8.0 - 2.0 = 6.0
Continue calculation(y/n): y
Enter choice(1/2/3/4): 4
Enter first number: 8
Enter second number: 2
8.0 / 2.0 = 4.0
Continue calculation(y/n): n
```

Question 3
Write a program to concatenate, reverse and slice a string?
Code 3

```
def stringConcatenation(str1, str2):
   return str1+str2


def stringReverse(str1):
   return str1.reverse()


def stringSlice(str1, startIndex, endIndex):
   return str1[startIndex:endIndex]
```

Question : 4
Why is Python a popular programming language?
That's because the language emphasizes readability and makes coding very easy. Python is also the fastest-growing programming language in the world. Its high-level, interpreted, and

object-oriented architecture makes it ideal for all types of software solutions.

Question : 5
What are the other Frameworks that can be used with python?
Django
Pyramid
Web2py
CherryPy

Question :6
Full form of WSGI?
WSGI stastands for Web Server Gateway Interface