Write Python functions for the following programs:

1. Create a class SharpSearch and write functions in Python whose parameters and return value are given below.

    a. Create a constructor which takes a list as parameter and store in as class member.

```
    def __init__(self, list):
// your code goes here

Example:
SharpSearch s = SharpSearch([5,4,7,1,4,9])
```

    b. Write a function SearchFirst which takes a parameter *value* and returns the index of the location of the first occurrence of the value

```
    def SearchFirst(self, n):
        // your code goes
here
                                output if we execute the below given code
Example: The following is the
SharpSearch s =
SharpSearch([5,4,7,1,4,9])
Print(s.SearchFirst(4))

Output:
1
```

    c. Write a function SearchLast which takes a parameter *value* and returns the index of the location of the last occurrence of the value

```
    def SearchLast(self, n):
        // your code goes here

Example: The following is the output if we execute the below given code
SharpSearch s = SharpSearch([5,4,7,1,4,9])
Print(s.SearchLast(4))
Print(s.SearchLast(5))
Print(s.SearchLast(15))

Output:
4
0 -1
```

    d. Write a function Search which takes a parameter *value* and returns the index of the location of the value.
    If this function calls for the first time, then it must return the location of the first occurrence of the value. On next call, it returns the next occurrence of the location or -1 if the element not found.

```
    def Search(self, n):
        // your code goes here

Example: The following is the output if we execute the below given code
SharpSearch s =
SharpSearch([5,4,7,1,4,9])
print(s.Search(4)) print(s.Search(4))
print(s.Search(4)) print(s.Search(4))

Output:
1
4
-1
-1
```

e. Write a function SearchAll which takes a parameter *value* and returns a list containing indices of all locations of the value. It returns an empty list if the value does not exist.

```
    def SearchAll(self, n):
        // your code goes  ere

                            he output if we execute the below given code
Example: The following is   ([5,4,7,1,4,9])
SharpSearch s =
print(s.SearchAll(4))

Output:
[1,4]
```