1. **Given the list my_list = [10, 20, 30, 40, 50], write a program to:**

- **Access the first element.**
- **Access the last element using negative indexing.**
- **Access the third element.**

```
>>> my_list = [10,20,30,40,50]
>>> my_list[0]
10
>>> my_list[-1]
50
>>> my_list[2]
30
```

2. **Create a list of 5 strings (e.g., names of fruits). Use indexing to:**

- **Print the second and fourth elements.**
- **Replace the third element with a new string.**

```
>>> fruits = ["Apple","Banana","Mango","Kiw
i"]
>>> print(fruits[1],fruits[3])
Banana Kiwi
>>> fruits[2] = "Pomogrante"
>>> fruits
['Apple', 'Banana', 'Pomogrante', 'Kiwi']
```

3. **Given the list nums = [1, 2, 3, 4, 5, 6, 7, 8, 9], write a program to:**

- **Print the first 5 elements using slicing.**
- **Print every alternate element starting from the second element.**
- **Reverse the list using slicing.**

```
>>> nums = [1, 2, 3, 4, 5, 6, 7, 8, 9]
>>> nums[:5]
[1, 2, 3, 4, 5]
>>> nums[1::2]
[2, 4, 6, 8]
>>> nums[::-1]
[9, 8, 7, 6, 5, 4, 3, 2, 1]
```

4. **Create a list of the first 10 letters of the alphabet. Use slicing to:**

- **Extract the first 5 letters.**
- **Extract the last 5 letters.**
- **Extract every second letter from the list.**

```
>>> alpa = ["a","b","c","d","e","z","x","y","r",
"h"]
>>> apla[:5]
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'apla' is not defined
>>> alpa[:5]
['a', 'b', 'c', 'd', 'e']
>>> alpa[:-6:-1]
['h', 'r', 'y', 'x', 'z']
>>> alpa[::2]
['a', 'c', 'e', 'x', 'r']
```

5. **Given the list colors = ['red', 'blue', 'green'], write a program to:**

- **Insert 'yellow' at the second position.**
- **Append 'purple' to the end of the list.**
- **Add 'orange' at the beginning of the list.**

```
>>> colors = ['red', 'blue', 'green']
>>> colors.insert(1,'yellow')
>>> colors
['red', 'yellow', 'blue', 'green']
>>> colors.append('purple')
>>> colors
['red', 'yellow', 'blue', 'green', 'purple']
>>> colors.insert(0,'orange')
>>> colors
['orange', 'red', 'yellow', 'blue', 'green',
'purple']
```

6. **Create an empty list. Write a program to:**

- **Insert the numbers 1 to 5 at the beginning of the list one by one using a loop.**

```
lst = []
for i in range(1,6):
    lst.append(int(input("Enter the number  : ")))
print(lst)
```

```
Enter the number  : 1
Enter the number  : 2
Enter the number  : 3
Enter the number  : 4
Enter the number  : 5
[1, 2, 3, 4, 5]
```

- **Insert the string 'middle' at index 2.**

```
lst = []
for i in range(1,6):
    lst.append(int(input("Enter the number  : ")))
lst.insert(1,'middle')
print(lst)
```

```
Enter the number  : 1
Enter the number  : 2
Enter the number  : 3
Enter the number  : 4
Enter the number  : 5
[1, 'middle', 2, 3, 4, 5]
```

7. **Given the list nums = [10, 20, 30, 40, 50, 60], write a program to:**

- **Remove the third element.**
- **Delete the last element using indexing.**
- **Clear the entire list.**

```
>>> nums = [10, 20, 30, 40, 50, 60]
>>> del nums[2]
>>> nums
[10, 20, 40, 50, 60]
>>> del nums[-1]
>>> nums
[10, 20, 40, 50]
>>> nums.clear()
>>> nums
[]
```

8. Create a list by accepting user inputs. Write a program to:

- **Delete the first and last elements.**
- **Remove the element at index 3 using pop().**

```
lst = []
for i in range(0,6):
    lst.append(((input("Give the input: "))))

print("The inputs given are: ")
for item in lst:
    print(item)
del lst[0]
lst.pop()
lst.pop(3)
print(lst)
```

```
Give the input: apple
Give the input: mango
Give the input: banana
Give the input: kiwi
Give the input: orange
Give the input: berries
The inputs given are:
apple
mango
banana
kiwi
orange
berries
['mango', 'banana', 'kiwi']
```

9. Write a program to:

- **Create a list of numbers from 1 to 10.**
- **Extract a sublist from index 2 to 7.**
- **Insert the number 99 after the fifth element.**

```python
lst = []
for i in range(0,10):
    lst.append(i+1)
print("List items are: ")
for items in lst:
    print(items)
print(lst[2:8])
lst.insert(5,99)
print(lst)
```

```
List items are:
1
2
3
4
5
6
7
8
9
10
[3, 4, 5, 6, 7, 8]
[1, 2, 3, 4, 5, 99, 6, 7, 8, 9, 10]
```

10. Given my_list = ['a', 'b', 'c', 'd', 'e', 'f', 'g']:

- **Extract the sublist ['b', 'c', 'd'] using slicing.**
- **Replace the element 'd' with 'x'.**
- **Remove the element 'g' and append 'z' to the list.**

```python
my_list = ['a', 'b', 'c', 'd', 'e', 'f', 'g']
print(my_list[1:4])
my_list[3] = 'x'
print(my_list)
my_list.pop()
my_list.append('z')
print(my_list)
```

```
['b', 'c', 'd']
['a', 'b', 'c', 'x', 'e', 'f', 'g']
['a', 'b', 'c', 'x', 'e', 'f', 'z']

=== Code Execution Successful ===
```