

DATA ANALYTICS WITH PYTHON

TASK-1

Description: This task involves understanding the basic data types in Python such as lists, dictionaries, and sets.

Responsibility: Write a Python program to create a list, a dictionary, and a set. Perform basic operations like adding, removing, and modifying elements.

#basic task like adding removing and modifying list

Create a list

```
my_list = [1, 2, 3, 4, 5]
```

Add an element to the end of the list

```
my_list.append(6)
```

Remove the last element from the list

```
my_list.pop()
```

Modify the first element of the list

```
my_list[0] = 0
```

Print the modified list

```
print(my_list)
```

```
→ [0, 2, 3, 4, 5]
```

basic task like adding removing and modifying dictionary

Create a dictionary

```
my_dict = {'name': 'John', 'age': 30, 'city': 'New York'}
```

Add a new key-value pair to the dictionary

```
my_dict['profession'] = 'Software Engineer'
```

Remove a key-value pair from the dictionary

```
del my_dict['age']
```

Modify the value of an existing key

```
my_dict['city'] = 'London'
```

Print the modified dictionary

```
print(my_dict)
```

```
→ {'name': 'John', 'city': 'London', 'profession': 'Software Engineer'}
```

basic task like adding removing and modifying set

basic task like adding removing and modifying set

Create a set

```
my_set = {1, 2, 3, 4, 5}
```

Add an element to the set

```
my_set.add(6)
```

Remove an element from the set

```
my_set.remove(3)
```

Modify an element in the set (not possible directly)

To modify an element, we need to remove it and add a new one

```
my_set.remove(1)
```

```
my_set.add(0)
```

Print the modified set

```
print(my_set)
```

$$\vec{r} = (0, 2, 4, 5, 6)$$