

## DATA ANALYSIS WITH PYTHON PROGRAM

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### 1. Write a Python program to create a list.

```
my_list = []  
  
# Add elements to the list  
my_list.append("kunal")  
my_list.append("dhruv")  
my_list.append("ayush")
```

```
print(my_list)
```

Output :-

```
['kunal', 'dhruv', 'ayush']
```

### 2. Write a Python program to create a dictionary.

```
person = {}  
  
person["name"] = "Dhruv Patel"  
person["age"] = 20  
person["occupation"] = "Software Engineer"
```

```
print(person)
```

Output :-

```
{'name': 'Dhruv Patel', 'age': 20, 'occupation':  
'Software Engineer'}
```

### 3. Write a Python program to create a set.

```
# Create an empty set
fruits = set()
```

```
# Add elements to the set
fruits.add("mango")
fruits.add("banana")
fruits.add("watermelon")
```

```
# Print the set
print(fruits)
```

Output :-

```
{'mango', 'banana', 'watermelon'}
```

**4. Write a Python program to create and Perform basic operations like adding, removing, and modifying elements.**

```
# Create a list
my_list = [1, 2, 3]
print(my_list)
```

```
# Add an element to the end of the list
my_list.append(4)
print(my_list)
```

```
# Insert an element at a specific index
my_list.insert(1, 5)
print(my_list)
```

```
# Remove an element by value
my_list.remove(3)
print(my_list)
```

```
# Modify an element by index
my_list[2] = 6
print(my_list)
```

Output :-

```
[1, 2, 3]
[1, 2, 3, 4]
[1, 5, 2, 3, 4]
[1, 5, 2, 4]
[1, 5, 6, 4]
```

##### **5. The whole program in one code .**

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

**# Create a list**

```
my_list = [1, 2, 3]
print("List:", my_list)
```

**# Add an element to the list**

```
my_list.append(4)
print("List:", my_list)
```

**# Create a dictionary**

```
person = {"name": "Dhruv", "age": 20}
print("Dictionary:", person)
```

**# Add a key-value pair to the dictionary**

```
person["occupation"] = "computer Engineer"
print("Dictionary:", person)
```

**# Create a set**

```
festivals = {"Diwali", "Holi"}
print("Set:", festivals)
```

**# Add an element to the set**

```
festivals.add("Pongal")
print("Set:", festivals)
```

**Output:-**

**List: [1, 2, 3]**

**List: [1, 2, 3, 4]**

**Dictionary: {'name': 'Dhruv', 'age': 20}**

**Dictionary: {'name': 'Dhruv', 'age': 20, 'occupation': 'computer Engineer'}**

**Set: {'Diwali', 'Holi'}**

**Set: {'Diwali', 'Holi', 'Pongal'}**