Python for Data Analytics

Scenario

0   1   2   3   4

```
sam =[45, 36, 54, 78, 44]
```

0 – Geography

History - ?

1 – History

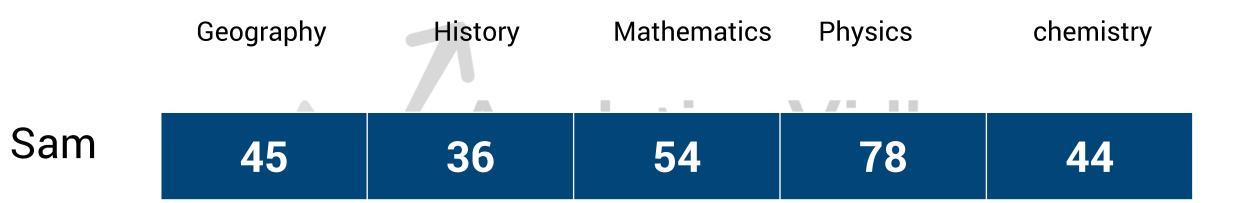Geography - ?

2 – Mathematics

3 – Physics

4 – Chemistry

Scenario

1. Many a times this data is not available or hard to create.

2. Sometimes we do not want our data to be a sequence.

3. Also sometimes, we want to access our data by names as in the previous example.

Dictionary

Scenario

	Geography	History	Mathematics	Physics	chemistry
Sam	45	36	54	78	44

Dictionary Overview

Topics that we will be covering

1. What is a Dictionary?

2. Accessing elements of a Dictionary

3. Adding elements to a Dictionary

4. Deleting elements of a Dictionary

What is a Dictionary?

A dictionary is an un-ordered data structure with elements separated by comma and stored as key : value pair. A dictionary is enclosed within curly brackets.

Some examples of List -

```
dict1={'Ramesh': 150, 'Suresh': 146, 'Sudesh': 160}
```
← Dictionary = key : value, value = number

```
dict2={'Ramesh':[150,46],'Suresh':[146,58],'Sudesh':[160,50]}
```
← Dictionary = key : value, value = List

Accessing elements of a Dictionary

Elements are accessed by keys rather than index.

```
dict2={'Ramesh':[150,46],'Suresh':[146,58],'Sudesh':[160,50]}
```

Dictionary accessed by index

```
dict2[1]
```

```
-------------------------------------------------------------------
------------
KeyError                                            Traceback (most rece
nt call last)
<ipython-input-6-dcfc8a4cd039> in <module>()
----> 1 dict2[1]

KeyError: 1
```

Accessing elements of a Dictionary

Elements are accessed by keys rather than index.

```
dict2={'Ramesh':[150,46],'Suresh':[146,58],'Sudesh':[160,50]}
```

Dictionary accessed by key

```
dict2['Suresh']
```

```
[146, 58]
```

Adding elements to a Dictionary

```python
dict2={'Ramesh':[150,46],'Suresh':[146,58],'Sudesh':[160,50]}
```

Adding a single element

```python
dict2['Neeraj']=[176,75]
```

```python
dict2
```

```
{'Neeraj': [176, 75],
 'Ramesh': [150, 46],
 'Sudesh': [160, 50],
 'Suresh': [146, 58]}
```

Adding elements to a Dictionary

```
dict2={'Ramesh':[150,46],'Suresh':[146,58],'Sudesh':[160,50]}
```

Adding multiple elements at once

```
dict2.update({'sunil':[150,70],'disha':[155,80]})
```

```
dict2
```

```
{'Ramesh': [150, 46],
 'Sudesh': [160, 50],
 'Suresh': [146, 58],
 'disha': [155, 80],
 'sunil': [150, 70]}
```

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Deleting element of a Dictionary

```
dict2={'Ramesh':[150,46],'Suresh':[146,58],'Sudesh':[160,50]}
```

Deleting an element

```
del dict2['Ramesh']
```

```
dict2
```

```
{'Sudesh': [160, 50], 'Suresh': [146, 58]}
```

Thank You