Lists, Dicts, & File IO with Python

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Agenda for Discussion

- Storing values in Lists
 - List
 - Constructing a list
 - Accessing list items
- 2 Dict
 - Introducing Dict
- File IO
 - Reading from a File
 - Writing to a file





What is a list?







A list in Python, is used to store multiple values. These values can be homogeneous or heterogeneous.





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```
a = ["milk", "apple", "banana"]
is an example of homogeneous list. Each item in the list is a string.
```

a = ["milk", 2.5, "apple", 3, "banana", 12] is an example of heterogeneous list. Each item is either string, int or float.





```
Let
a = ["milk", 2.5, "apple", 3, "banana", 12]
```

How do we print all the items from list 'a'?





```
Let a = ["milk", 2.5, "apple", 3, "banana", 12]
```

How do we print all the items from list 'a'?

Using for loop

```
for item in a:
    print(item)
```





```
Let
a = ["milk", 2.5, "apple", 3, "banana", 12]
```

How do we access 'apple' from list 'a' ?





Let

```
a = ["milk", 2.5, "apple", 3, "banana", 12]
```

How do we access 'apple' from list 'a' ?

Using indexing

- a[2] points to 'apple'
- a[0] points to 'milk'





Introducing Dict

Dictionary (Dict) is used to store (key, value) pair.





Software Foundation Course (Part I)

Introducing Dict

Dictionary (Dict) is used to store (key, value) pair.

A list of (key, value) pairs is stored within curly-braces separated by commas





Introducing Dict

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Example of dict

```
d = {"milk": 2.5, "apple": 3, "banana": 12}
```





Reading from a File

Let's say we would like to read a CSV file called *players.csv*





Software Foundation Course (Part I)

Reading from a File

Let's say we would like to read a CSV file called *players.csv* How do we read the contents of the **players.csv** file ?





Reading from a File

Let's say we would like to read a CSV file called *players.csv* How do we read the contents of the **players.csv** file ?

```
Use of open() function
f = open("players.csv", 'r')
print(f.read())
print(f.readlines())
```





Writing to a file

Let's say after some statistics calculation, you would like to store statistics into a files. How do we write to a file **output.txt**?





Software Foundation Course (Part I)

Writing to a file

Let's say after some statistics calculation, you would like to store statistics into a files. How do we write to a file **output.txt**?

```
Use of write() function

f = open("output.txt", 'w')
f.write("Mean score of the players is 59.638")
f.close()
```

```
2
```



References

- Python Data Structures
- Input and Output in Python





Thank You!

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Post your queries at: resources@e-yantra.org



