

Sequence Data types

Spoken Tutorial Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Learning Objectives



Learning Objectives

▶ Sequence Data types



Learning Objectives

- ▶ **Sequence Data types**
 - ▶ **List**



Learning Objectives

- ▶ **Sequence Data types**
 - ▶ **List**
 - ▶ **String**



Learning Objectives

- ▶ **Sequence Data types**
 - ▶ List
 - ▶ String
 - ▶ **Tuple**



Learning Objectives

- ▶ **Sequence Data types**
 - ▶ **List**
 - ▶ **String**
 - ▶ **Tuple**
- ▶ **Accessing the above data types using index**



Learning Objectives

- ▶ **Convert list to tuple and vice-versa**



Learning Objectives

- ▶ **Convert list to tuple and vice-versa**
- ▶ **Convert string to list and vice-versa**



System Specifications



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▶ Ubuntu Linux 16.04



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- ▶ **Ubuntu Linux 16.04**
- ▶ **Python 3.4.3**



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- ▶ **Ubuntu Linux 16.04**
- ▶ **Python 3.4.3**
- ▶ **IPython 5.1.0**



Pre-requisite

To practise this tutorial, you should know how to



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To practise this tutorial, you should know how to

- ▶ **run basic Python commands on the ipython console**



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If not, see the relevant Python tutorials on <http://spoken-tutorial.org>



Sequence data types

- ▶ **Sequence data types are those in which elements are kept in a sequential order**



Sequence data types

- ▶ **Sequence data types are those in which elements are kept in a sequential order**
- ▶ **The elements are accessed using index numbers**



Sequence data types

- ▶ **The sequence datatypes in Python are**



Sequence data types

- ▶ The sequence datatypes in Python are
 - ▶ **List**



Sequence data types

- ▶ The sequence datatypes in Python are
 - ▶ List
 - ▶ String



Sequence data types

- ▶ The sequence datatypes in Python are
 - ▶ List
 - ▶ String
 - ▶ Tuple



Lists



- ▶ **List is a container that holds a number of objects in the given order**



Lists

- ▶ List is a container that holds a number of objects in the given order
- ▶ **Example:**
`num_list = [1,2,3,4]`



Lists

- ▶ List is a container that holds a number of objects in the given order
- ▶ Example:
`num_list = [1,2,3,4]`
- ▶ A list can store data of any type



- ▶ List is most useful when storing data of identical type



- ▶ List is most useful when storing data of identical type
- ▶ **Examples:**



Lists

- ▶ List is most useful when storing data of identical type
- ▶ Examples:
 - ▶ Name of books in a library



Lists

- ▶ List is most useful when storing data of identical type
- ▶ Examples:
 - ▶ Name of books in a library
 - ▶ **Passengers on a flight**



Exercise 1

- ▶ Check if 3 is an element of the list [1,7,5,3,4]
- ▶ Change the third element in the list to 21



Exercise 2

- ▶ Convert the string “Elizabeth is queen of England” to “Elizabeth is queen”



Summary

- ▶ Use the sequence data types
 - ▶ List
 - ▶ String
 - ▶ Tuple
- ▶ Split and join a list using `split()` and `join()` functions respectively



Summary

- ▶ Convert **list** to **tuple** and vice-versa
- ▶ Convert **string** to **tuple** and vice-versa



Evaluation

1. What is the major difference between **tuple** and **list**?
2. Split the below string on whitespaces
s = "Split this string on whitespaces"



Solution 1

- ▶ **tuple** cannot change the value at a particular index
- ▶ But **list** can change the value
- ▶ **tuple** is used to store data related to an item
- ▶ But **list** is typically used to store items of identical type



Solution 2

```
string.split()
```



Forum to answer questions

- ▶ **Do you have questions in THIS Spoken Tutorial?**
- ▶ **Choose the minute and second where you have the question.**
- ▶ **Explain your question briefly.**
- ▶ **Someone from the FOSSEE team will answer them. Please visit**



<http://forums.spoken-tutorial.org/>



Forum to answer questions

- ▶ Questions not related to the Spoken Tutorial?
- ▶ Do you have general / technical questions on the Software?
- ▶ Please visit the FOSSEE Forum
<http://forums.fossee.in/>
- ▶ Choose the Software and post your question.



Textbook Companion Project

- ▶ **The FOSSEE team coordinates coding of solved examples of popular books**
- ▶ **We give honorarium and certificate to those who do this**

For more details, please visit this site:

<http://tbc-python.fossee.in/>



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- ▶ **It is supported by the National Mission on Education through ICT, MHRD, Government of India**
- ▶ **More information on this Mission is available at:**

<http://spoken-tutorial.org/NMEICT-Intro>



THANK YOU!

For more Information, visit our website
<http://fossee.in/>

