Getting started with for

Spoken Tutorial Project
http://spoken-tutorial.org
National Mission on Education through ICT

http://sakshat.ac.in

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Learning Objectives

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- **Use the for loop**

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- Use range() function

System Specifications

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- **Ubuntu Linux 14.04 operating system**

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- **`Python 3.4.3`**

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- **`IPython 5.1.0`**

Pre-requisite

- **To practice this tutorial, you should know how to use lists**

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

Syntax :for

```
for <loop variable> in sequence:
    <statement 1>
    <statement 2>
      ...
    <statement n>
```

- for statement iterates over the members of a sequence in order, executing the block each time

Exercise 1

- Use the same example we used in sqrt_num_list.py
- Type each line of the code in the IPython interpreter
- Skip the line:
  print("This is outside for-loop")

`range()` function

Generates a list of integers

range() function

Generates a list of integers

- **Syntax :**
  range([start,] stop[, step])

range() function

Example :

- **range(1, 20, 2)**
  generates integers from 1 to 19 with step of 2

range() function

Example :

- **range(1, 20, 2)**
  generates integers from 1 to 19 with step of 2
- **range(20)**
  generates integers from 0 to 19

Exercise 2

- **Find out the cube of all the numbers from 1 to 10**

Exercise 2

- Find out the cube of all the numbers from 1 to 10
- Execute this in the Python interpreter

Exercise 3

Print all the odd numbers from 1 to 50

Summary

In this tutorial, we learnt to,

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In this tutorial, we learnt to,

- Create blocks in python using for
- Indent the blocks of code
- Iterate over a list using for loop
- Use the range() function

Evaluation

1. **Indentation is not mandatory in Python**
   - **True**
   - **False**

Evaluation

2. Write a for loop to print the product of all natural numbers from 1 to 20

3. What will be the output of :

range(1, 5)

Solutions

1. **False, Indentation is essential in python**

2.
```
y = 1
for x in range(1,21):
    y *= x
print (y)
```

Solutions

3. range(1, 5) will produce a list of integers from 1 to 4 [1,2,3,4]

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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- More information on this Mission is available at:
  http://spoken-tutorial.org/NMEICT-Intro

THANK YOU!

For more Information, visit our website
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