# Python programming language

Sachin

/dev/null

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## Introduction

- ▶ Scripting language
- ▶ Easy to learn/Powerful
- ▶ Efficient data structures
- ▶ Object Oriented
- ▶ Dynamic Typing
- ▶ Extended support for C(CPython), Java(Jython) & (.NET)IronPython
- ▶ Runs on most platforms
- ▶ Latest version 2.7.11 & 3.5.1

# Why Python?

- ▶ Readable code
- ▶ Faster development cycle
- ▶ Powerful standard libraries
- ▶ Powerful interpreter
- ▶ https://www.python.org/about/success/

# Features

► Easy

```
1  first_name = 'Sachin'
2  print(first_name)   # Sachin
```

# Features

- Easy

```python
1  first_name = 'Sachin'
2  print("Hello %s!" % first_name)
3  print("Hello " + first_name + "!")
4  # Hello Sachin!
5  print("Hello",first_name)
6  # Hello Sachin
```

# Features

- Inbuilt libraries

```
1   for i in range(3):
2       print(i)
3   # 0
4   # 1
5   # 2
```

## Features

▶ Inbuilt libraries

```
1  import crypt
2  crypt.crypt('mysupersecretpassword')
3  # '$6$ipQOpnmdAK/tXVle$lEZw4mxJJrTPZsm...'
```

# Features

- ▶ Inbuilt libraries

```
1  import crypt
2  crypt.crypt('mysupersecretpassword', 'py')
3  # 'pyjwbR4BKuWLo'
```

- ▶ docs.python.org/3.4/library/crypt

# Features:

Powerful interpreters

- ▶ python
- ▶ ipython
- ▶ bpython(*we will use bpython*)

# Features

- *Indentation specifies scope*

```python
1  if cars:
2      for car in cars:
3          print(car.speed)
```

# Features

Package utils

- ▶ `pip`
- ▶ `easy_install`

# Python virtual environment

```
                  Physical system
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,|
|   python 2.5                               |
|   python 2.7                               |
|   python 3.4.3(system default)             |
|   python 3.5(unstable)                     |
|                                            |
|   ,,,,,,,,,,,,,'.    ,--------------.       |
|   |              |   |              |       |
|   | python 3.4.3 |   |  python 2.7  |       |
|   | (virtual env)|   | (virtual env)|       |
|   |              |   |              |       |
|   "--------------    '--------------'       |
|_____|
```

# Installation

```
sudo dnf install python3-virtualenv -y
sudo dnf install python3-devel -y
sudo dnf install python3-setuptools -y
```

## Create virtual env

```
mkdir ~/virtualenvs
virtualenv-3.4 ~/virtualenvs/pywar
```

# Virtual env

### Activate
```
source ~/virtualenvs/pywar/bin/activate
```

### Deactivate
```
deactivate
```

### Email

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