

# Distributing Python Packages Using Setuptools

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# About Me

- **Founded the SMC project in 2001 while studying at REC Calicut**
- **Employed by FSF India in 2002-2003**
- **Contributor to Zope project (2006-2010)**
- **Book Author: A Comprehensive Guide to Zope Component Architecture**
- **During PyCon India 2013, received the first Kenneth Gonsalves Award**

# Agenda

- **Installing Python**
- **Setting up development environment**
- **Distribution using Setuptools**
- **MANIFEST.in**
- **Console Scripts**

# Installing Python

- **Download**
- **Extract**
- **`./configure --prefix=/path/to/install`**
- **make**
- **make install**

# Setting up development environment

- `http://www.pip-installer.org/en/latest/installing.html`
- **`pip install virtualenv`**
- **`virtualenv venv1`**
- **`source venv1/bin/activate`**

# Distribution using Setuptools

```
mkdir -p hello/hello  
touch hello/hello/__init__.py  
touch hello/hello/main.py  
touch hello/setup.py  
touch README.txt
```

## Distribution using Setuptools - Continued

```
from setuptools import setup, find_packages

setup(name='hello',
      version='0.1.0',
      description='Hello World!',
      author='Baiju Muthukadan',
      packages=find_packages(),
      include_package_data=True,
      zip_safe=False,
      install_requires=[
          'setuptools',
      ],
      )
```

# Distribution using Setuptools - Continued

## **Content of hello/hello/main.py:**

```
def say_hello():  
    return 'Hello, World!'
```



# Distribution using Setuptools - Continued

## **Creating source distributions:**

```
cd hello  
python setup.py sdist
```

## **Installing distributions:**

```
pip install hello-0.1.0.tar.gz
```

# MANIFEST.in

## **Content of MANIFEST.in:**

```
include *.txt
```

# Console Scripts

```
from setuptools import setup, find_packages

setup(name='hello',
      version='0.1.0',
      description='Hello World!',
      author='Baiju Muthukadan',
      packages=find_packages(),
      include_package_data=True,
      entry_points={
          'console_scripts': ['hello=hello.main:run'],
      },
      zip_safe=False,
      install_requires=[
          'setuptools',
      ],
      )
```

# Console Scripts - Continued

## Content of hello/hello/main.py:

```
def say_hello():  
    return 'Hello, World!'  
  
def run():  
    hello = say_hello()  
    print(hello)
```

# Thanks!

`http://muthukadan.net`

# Command line parsing

## Content of hello/hello/main.py:

```
import argparse

def say_hello(name):
    return 'Hello, %s!' % name

def run():
    parser = argparse.ArgumentParser()
    parser.add_argument("name", help="Your name")
    args = parser.parse_args()

    hello = say_hello(args.name)
    print(hello)
```

# Command line parsing - Continued

## Content of hello/hello/main.py:

```
import argparse

def say_hello(name, count):
    hello_list = []
    for i in range(count):
        hello_list.append('Hello, %s!' % name)
    return hello_list

def run():
    parser = argparse.ArgumentParser()
    parser.add_argument("name", help="Your name")
    parser.add_argument("--count", type=int)
    args = parser.parse_args()

    for hello in say_hello(args.name, args.count):
        print(hello)
```