KOLT Python

Python Modules and Third-Party Packages

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KOÇ UNIVERSITY
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Agenda

1. Python Modules and Packages

2. Package Management

3. Virtual Environments

Python Modules

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- Modules help you to break down large programs into small manageable and organized files

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- Modules help you to break down large programs into small manageable and organized files
- Modules provides reusability of a code
- Most used functions can be defined in Modules and can be used in other programs without copying the definitions into every program
- To use definitions in modules, modules are needed to be **imported**

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- All packages are modules but not all modules are packages

Importing Modules

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```python
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from module_name **import** func1 **as** function # func1 will be used by calling "function"

from module_name **import** * # all names in module

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Visit *pypi.org* to explore packages.

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$ pip -V
pip 20.0.2 from --PATH_TO_PIP-- (python 3.5)
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```
$ pip -V
pip 20.0.2 from --PATH_TO_PIP-- (python 3.5)
$ python -m pip -V
pip 20.0.2 from --PATH_TO_PIP-- (python
version)
```

Common pip commands

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Install a package:

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```
$ pip install package_name # latest version
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version
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Update a package:

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Search PyPI for matches:

```
$ pip search query
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What happens if two different programs use the same library?

- We might want to use different versions of the same library.
- Updating a library for **Program A** can harm another **Program B**. (*Breaking Changes*)
- We want **isolation** between programs.

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Activating a virtual environment:
cd(Change directory) to virtual environment folder.
In Windows: $ **Scripts\activate**
In Mac/Linux: $ **source bin/activate**

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In Windows: `$ Scripts\activate`

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Deactivating a virtual environment:

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$ deactivate
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