Python Programming Language Notes

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1 Built-In Functions

1.1 abs()

Input must be an **int** , **float** or **complex number** .

- Returns the absolute value if the argument is a float or int.
- Returns the magnitude if the argument is a complex number.

1.2 all()

Input must be an **iterable** .

- Returns True if:
  - all elements of the iterable are true
  - the iterable is **empty**

1.3 any()

Input must be an **iterable** .

- Returns True if:
  - any of the elements of the iterable are true
- Returns False if:
  - the iterable is **empty**

1.4 ascii()

Input is an **object** .

Use this function to display a printable representation of an object, similar to repr(), but use escapes for non-ascii characters.

1.5 bin()

Input must be an **int** or an **object with a __index__() method** that returns an int.

Convert an integer to a binary string.

2 pip - Python Package Index

2.1 Install pip

2.1.1 Without Internet Connection

1. Download **get-pip.py**
2. On a computer with an internet connection create the following wheels.
   - pip
   - setuptools
3. Move the wheels to the computer without an internet connection.
4. Call the following command

```
python get-pip.py --no-index --find-links=WheelHouseDirectory
```

2.2 Find the Site Packages Installation Directory

```
python -c "from distutils.sysconfig
           import get_python_lib;
           print get_python_lib()"
```

2.3 Install Packages

2.3.1 Install a Single Package

```
pip install PackageName
```

2.3.2 Install a Packages From requirments.txt File

```
pip install -r requirements.txt
```

2.3.3 Install Package in Developer Mode

This option allows a package to be actively developed while being installed in a Python interpreter.

```
pip install -e .
```

2.4 List Outdated Modules

```
pip list -o
```

2.5 Change the Version of an Installed Package

2.5.1 Upgrade to the Latest Version

```
pip install --upgrade PackageName
```

2.5.2 Install a Previous Version

```
pip install --upgrade PackageName==Version
```

2.6 Create a Wheels

```
pip wheel --wheel-dir=WheelHouseDirectory
```

2.7 Package Configuration

The package configuration may be maintained by a single text file, which is commonly called requirements.txt. Boolean operations may also be used in these configuration files. To create a snapshot of the current interpreter use the following command.

```
pip freeze > requirements.txt
```

3 numpy

4 pandas

5 scipy

References