

DAY-23 VIRTUAL ENVIRONMENT

Setting up Virtual Environments

To start with project, it would be better to have a virtual environment. Virtual environment can help us to create an isolated or separate environment. This will help us to avoid conflicts in dependencies across projects. If you write `pip freeze` on your terminal you will see all the installed packages on your computer. If we use `virtualenv`, we will access only packages which are specific for that project. Open your terminal and install `virtualenv`

```
asabeneh@Asabeneh:~$ pip install virtualenv
```

Inside the `30DaysOfPython` folder create a `flask_project` folder.

After installing the `virtualenv` package go to your project folder and create a virtual env by writing:

For Mac/Linux:

```
asabeneh@Asabeneh:~/Desktop/30DaysOfPython/flask_project$  
virtualenv venv
```

For Windows:

```
C:\Users\User\Documents\30DaysOfPython\flask_project>python -m  
venv venv
```

I prefer to call the new project `venv`, but feel free to name it differently. Let us check if the `venv` was created by using `ls` (or `dir` for windows command prompt) command.

```
asabeneh@Asabeneh:~/Desktop/30DaysOfPython/flask_project$ ls  
venv/
```

Let us activate the virtual environment by writing the following command at our project folder.

For Mac/Linux:

```
asabeneh@Asabeneh:~/Desktop/30DaysOfPython/flask_project$  
source venv/bin/activate
```

Activation of the virtual environment in Windows may vary on Windows Power shell and git bash.

For Windows Power Shell:

```
C:\Users\User\Documents\30DaysOfPython\flask_project>
venv\Scripts\activate
```

For Windows Git bash:

```
C:\Users\User\Documents\30DaysOfPython\flask_project>
venv\Scripts\. activate
```

After you write the activation command, your project directory will start with venv. See the example below.

```
(venv)
asabeneh@Asabeneh:~/Desktop/30DaysOfPython/flask_project$
```

Now, let's check the available packages in this project by writing `pip freeze`. You will not see any packages.

We are going to do a small flask project so let us install flask package to this project.

```
(venv)
asabeneh@Asabeneh:~/Desktop/30DaysOfPython/flask_project$ pip
install Flask
```

Now, let us write `pip freeze` to see a list of installed packages in the project:

```
(venv)
asabeneh@Asabeneh:~/Desktop/30DaysOfPython/flask_project$ pip
freeze
Click==7.0
Flask==1.1.1
itsdangerous==1.1.0
Jinja2==2.10.3
MarkupSafe==1.1.1
Werkzeug==0.16.0
```


When you finish you should deactivate active project using *deactivate*.

```
(venv) asabeneh@Asabeneh:~/Desktop/30DaysOfPython$ deactivate
```

The necessary modules to work with flask are installed. Now, your project directory is ready for a flask project. You should include the venv to your `.gitignore` file not to push it to github.

Exercises: Day 23

1. Create a project directory with a virtual environment based on the example given above.

 CONGRATULATIONS ! 