A CLOUD GURU

# Lesson Description - Creating and Running Python Scripts

Since this is a course about Python scripting, we will be writing the majority of our code in scripts instead of using the REPL. To create a Python script we can create a file ending with the file extension of `.py`.

**Creating Our First Python Script**

Let's create our first script to write our obligatory "Hello, World!" program:

```
$ vim hello.py
```

From inside this file, we can enter the lines of Python that we need. For the "Hello, World!" example we only need:

```
print("Hello, World!")
```

There are a few different ways that we can run this file. The first is by passing it to the `python3.6` CLI:

```
$ python3.6 hello.py
Hello, World!
```

**Setting a Shebang**

You'll most likely want your scripts to be:

1. Executable from anywhere (in our $PATH).
2. Executable without explicitly using the `python3.6` CLI.

Thankfully, we can set the process to interpret our scripts by setting a shebang at the top of the file:

*hello.py*

```
#!/usr/bin/env python3.6
print("Hello, World")
```

We're not quite done; now we need to make the file executable using `chmod`:

```
$ chmod u+x hello.py
```

Run the script now by using `./hello.py` and we'll see the same result. If we'd rather not have a file extension on our script, we can now remove that since we've put a shebang in the file `mv hello.py hello`, and running `./hello` will still result in the same thing.

**Adding Scripts to Our $PATH**

Now we need to make sure that we can put this in our `$PATH`. For this course, we'll be using a `bin` directory in our `$HOME` folder to store our custom scripts, but scripts can go into any directory that is in your $PATH.

Let's create a `bin` directory and move our script:

```
$ mkdir ~/bin
$ mv hello ~/bin/
```

Here's how we add this directory to the $PATH in our `.bashrc` (the `.bashrc` for this course already contains this):

```
$ export PATH=$HOME/bin:$PATH
```

Finally, run the hello script from our `$PATH`:

```
$ hello
Hello, World!
```