

# Introduction to Python Programming

## 2 – Getting Started

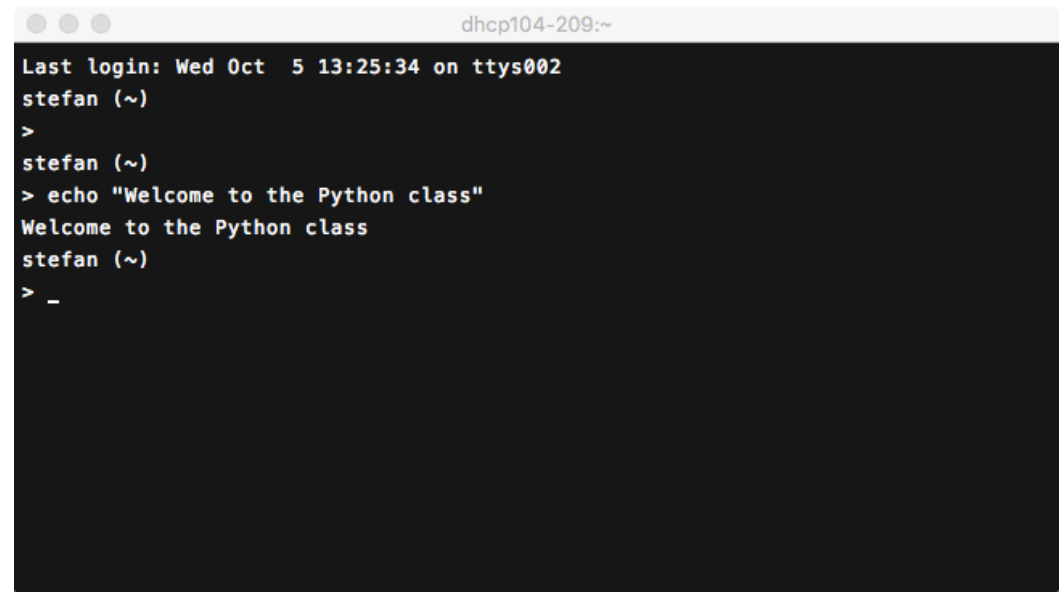
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# The command line

- aka terminal, terminal emulator, shell, cmd, ...
- a special program that you can use to interact with the operating system
  - ▶ start programs
  - ▶ request information about programs
  - ▶ terminate (“kill”) programs
  - ▶ ...



```
dhcp104-209:~  
Last login: Wed Oct  5 13:25:34 on ttys002  
stefan (~)  
>  
stefan (~)  
> echo "Welcome to the Python class"  
Welcome to the Python class  
stefan (~)  
> _
```

# Hello, World!

- Use your favorite text editor to create a file called `hello.py` containing the following python code.

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

- Open a terminal and go to the same directory where you put the file. You can navigate using the `cd` command.
- Run the program from the command line using the command:
  - ▶ `python3 hello.py`

# Integrated Developing Environments IDE

- Software tools for programmers
- Components:
  - ▶ Source Code Editor
  - ▶ Compiler / Interpreter
  - ▶ Build Automation Tools
  - ▶ Debugger
- Facilitates software development

# Python IDEs

- IDLE (comes with Python, simple)
- iPython Notebook (easy code-block execution)
- PyCharm (full IDE, recommended)
- Eclipse (powerful IDE, uses plugins: PyDev)
- NetBeans ...
- In this course, we introduce IDLE, Notebook and PyCharm. You are free to use any other IDE, but don't expect us to know everything about them!
- Anaconda: Python/R distribution with lots of libraries ...

# IDLE



# IDLE

- Click File > New Window. This opens a new source code file.  
Enter some source code.
  - ▶ e.g. `print("Source Code says Hello!")`
- Save the file as `hello.py`: File > Save
  - ▶ Make sure to always add “.py” explicitly when saving files!
- Syntax Highlighting: IDLE shows keywords / strings / ... in different colors.
- Click Run > Run Module (F5)
  - ▶ Results of running your source code file will show up in the Python Shell.

# PyCharm

- Start PyCharm.
- Create a new project: enter the folder name for your project.
- Right-click your new project.  
→ New → Python file → enter `hello` as the filename.
- PyCharm will create a file called `hello.py`
- Enter `print("Source Code says Hello!")`
- Save the file using `Ctrl+s`
- Run your program using `Alt+Shift+F10/X`