

Software Design & Development

CFS2160

Week 1 - Python

Session Plan

1. Reflect on last weeks session.
2. Tips on organising your work.
3. Look at the tutorial work.
4. Do a bit of coding.
5. A bit about practicing.
6. Questions?
7. Work on tutorial / practical work.

Last Weeks Session

If you did not attend my session last week, please ensure you read the slides 'SDM – CFS2160 Welcome - Slides' found in the Welcome folder on BrightSpace.

The session gave some insight into what to expect from my sessions.

Any questions regarding last weeks session?

Tips on Organising Work

To help organise your future work, create a folder on your K drive with a name such as this '**CFS2160 SDD**' this will ensure you can access your work from anywhere on the university campus.

Each week create a new folder within the folder and add each weeks work in to it, the benefits organising your work in such a way will become very clear in the coming weeks.

You may want to consider keeping the software and modelling parts of the module separate.

Keep a record of everything you do in this folder, you will need evidence of your work for your logbook assessment which is due later this year.

Look At Last Weeks Tutorial Work

If you have not done so already, follow the steps in the tutorial worksheet and ensure you have created the required accounts.

Understanding and correctly using GitHub is crucially important to your success on this module, Tony will go into further detail about using GitHub in the coming weeks.

If you work from home, having your code on GitHub means it is accessible from any location in the world and is much better than storing it on Google Drive or OneDrive!

You will benefit greatly if you spend some time now and learn and understand how GitHub works.

Do Some Coding

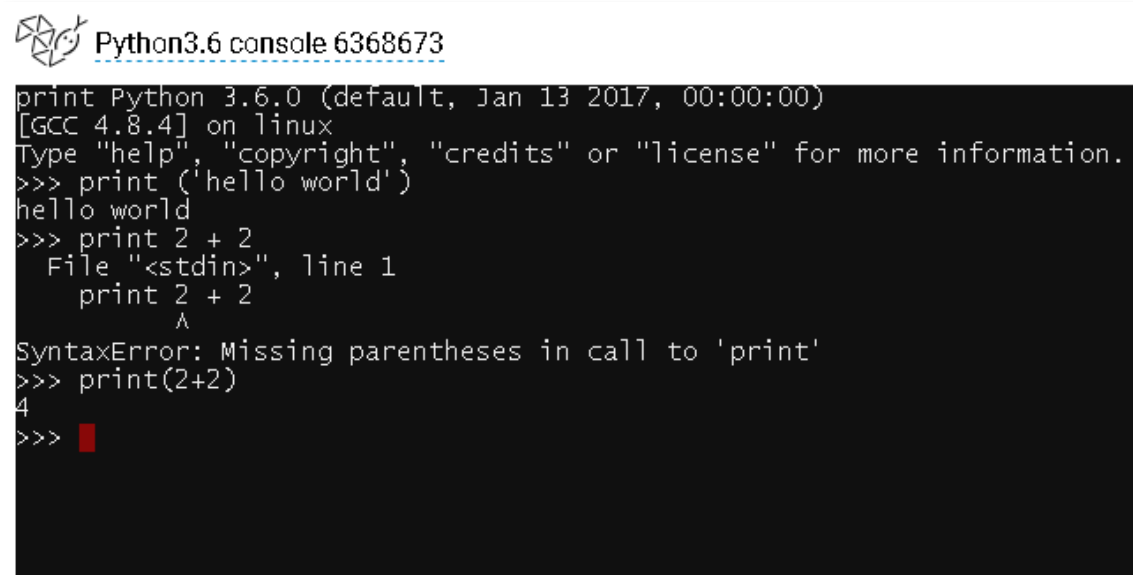
Experiment writing python code in PyCharm IDE or on the python anywhere website, try anything, if you make an error in the code, the console will give you an error message that can be used to fix the code.

Make sure you use sensible and meaningful filenames when saving your work.

Do not be afraid to experiment, there is nothing wrong with making mistakes. we can learn a lot when things go wrong.

A Simple Script

You can see in the code below, I have made an error when attempting to run some code. Inspect the code and try to see what I did wrong, and how I fixed it.



```
Python3.6 console 6368673
print Python 3.6.0 (default, Jan 13 2017, 00:00:00)
[GCC 4.8.4] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> print('hello world')
hello world
>>> print 2 + 2
File "<stdin>", line 1
    print 2 + 2
        ^
SyntaxError: Missing parentheses in call to 'print'
>>> print(2+2)
4
>>> █
```

The part of the message which says 'SyntaxError' is the key.

Why Hello. World?

Traditionally, programmers start learning a new language by writing the 'Hello. World' script. The script simply prints the text 'Hello. World' to the screen. This convention goes back to the very beginning of programming.

Don't ask me why though, I do not know!

I have been programming since 2001 and still make mistakes, it is perfectly normal to do. Don't be afraid to try new things, however, try make sure you learn from your mistakes.

More on Python

Python is an interpreted language, the code is read from the first character of the first line and continues until the programme has executed.

Indentations are crucial to the correct running of python code, pay attention to how you use indentations.

Now What?

1. Practice
2. Practice
3. Practice
4. Practice
5. Practice
6. Practice
7. Practice



Python3.6 console 10001243

```
Python 3.6.0 (default, Jan 13 2017, 00:00:00)
[GCC 4.8.4] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> i = 0
>>> while i < 10:
...     print('Practice')
...     i = i + 1
...
Practice
Practice
Practice
Practice
Practice
Practice
Practice
Practice
Practice
Practice
>>> █
```

Programming is a skill, all new skills require practice to become better at doing them. Spend your private study time practicing python before next week.

Questions

Any questions about today's session
or the module in general?

Finally

If you have any unfinished practical work, please continue to work on this.

Try to have this week's work completed before the next programming lecture, this will help you understand the lecture in greater detail.

Remember, practice is the key to becoming a great programmer.