



University of
South Australia

Problem Solving and Programming

Getting Started with python™

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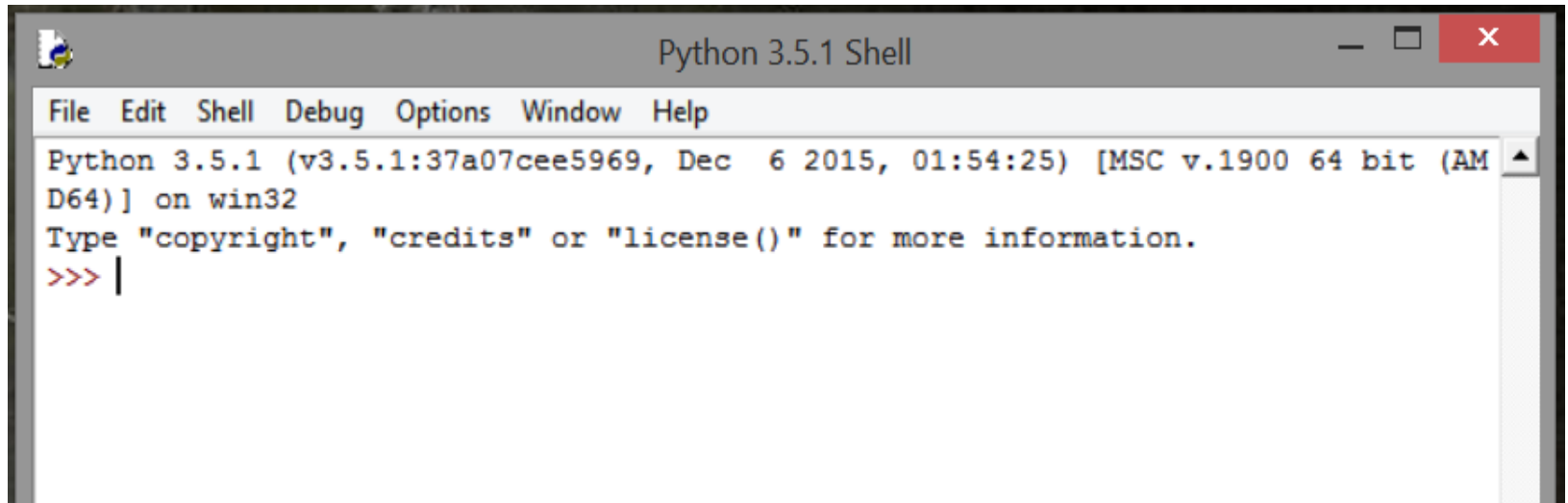
Getting Started with Python

- Download Python – **version 3.*** (latest version specified on the course website)
 - You can download Python and its Integrated Development Environment (IDLE) and install it on your home computer.

<http://www.python.org>

Getting Started with Python

- IDLE is an Integrated Development Environment for Python. Provides tools to write, execute and test a program.
- You will be using IDLE to enter all of your Python code in this course.
- IDLE provides you with an interactive interpreter, code editing and debugging tools.
- Once IDLE opens, you will see the following Python Shell window:

A screenshot of the Python 3.5.1 Shell window. The window has a title bar that says "Python 3.5.1 Shell" and standard Windows window controls (minimize, maximize, close). Below the title bar is a menu bar with the following options: File, Edit, Shell, Debug, Options, Window, and Help. The main area of the window contains the following text:

```
Python 3.5.1 (v3.5.1:37a07cee5969, Dec 6 2015, 01:54:25) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> |
```

Getting Started with Python

- In the Python Shell Window, you should see a prompt consisting of three angle braces: `>>>`
- The prompt tells you that the interpreter is ready for you to enter a command or expression.
- Performing calculations in the Shell window is similar to the way you perform calculations on a scientific calculator (most syntax is the same).

For example:

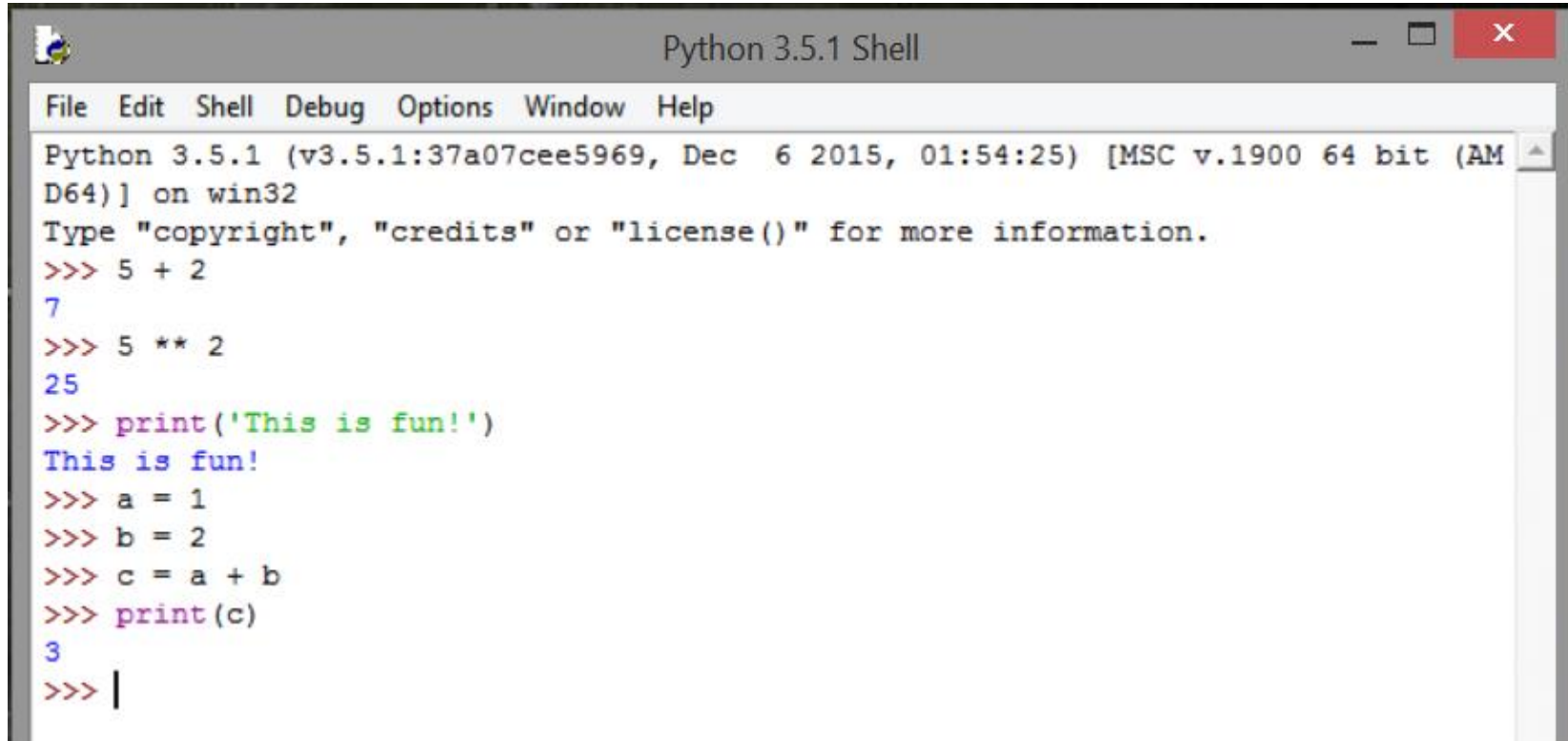
```
>> 5**2
```

```
ans =
```

```
25
```

Getting Started with Python

For example:

A screenshot of the Python 3.5.1 Shell window. The window has a title bar that says "Python 3.5.1 Shell" and standard window controls (minimize, maximize, close). Below the title bar is a menu bar with "File", "Edit", "Shell", "Debug", "Options", "Window", and "Help". The main area of the window shows the Python interpreter's prompt and output. The text displayed is: Python 3.5.1 (v3.5.1:37a07cee5969, Dec 6 2015, 01:54:25) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> 5 + 2
7
>>> 5 ** 2
25
>>> print('This is fun!')
This is fun!
>>> a = 1
>>> b = 2
>>> c = a + b
>>> print(c)
3
>>> |

```
Python 3.5.1 Shell
File Edit Shell Debug Options Window Help
Python 3.5.1 (v3.5.1:37a07cee5969, Dec 6 2015, 01:54:25) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
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```

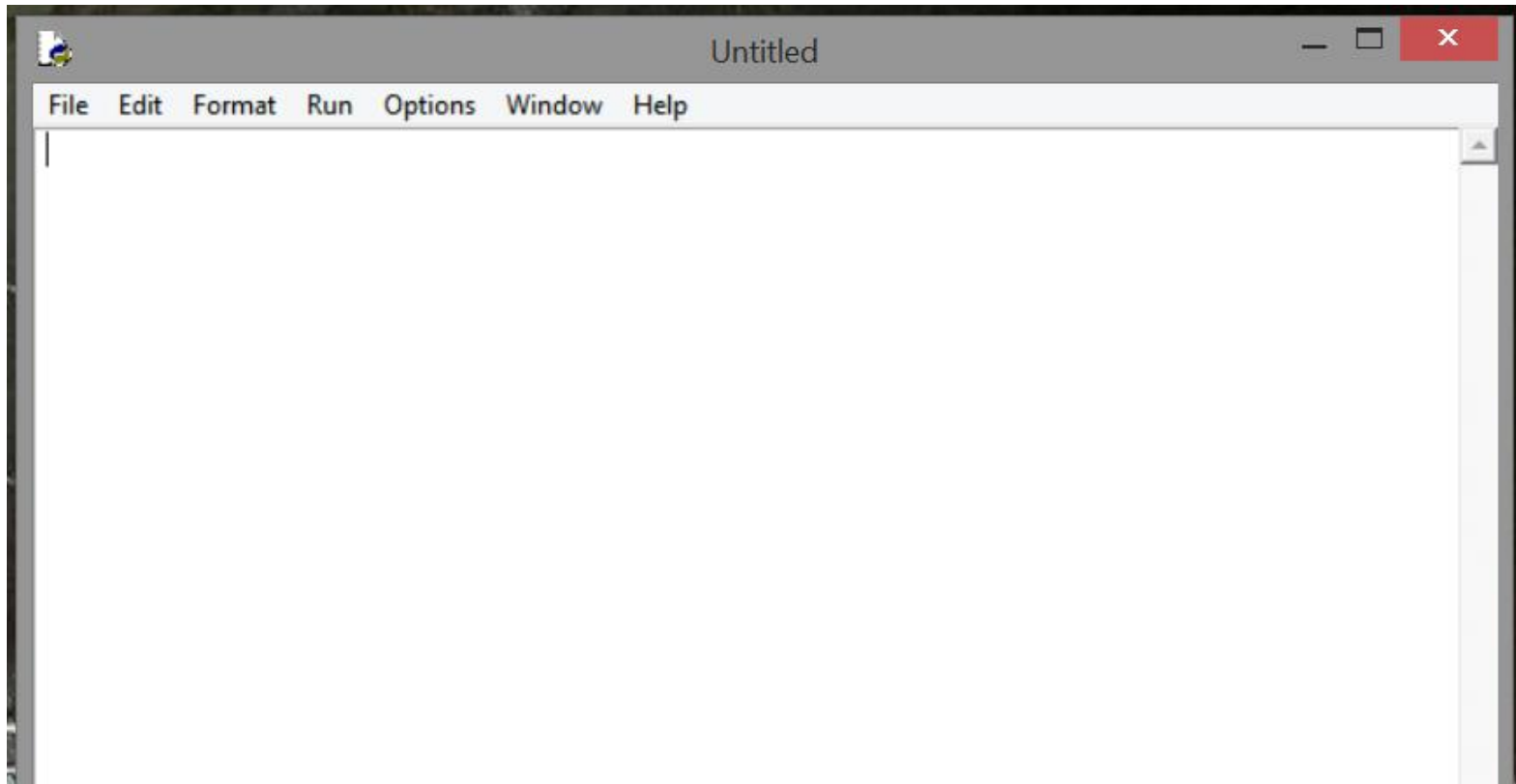
- To exit IDLE type `quit()` or `exit()` at the prompt.

Saving your Work

- As we have seen, it is possible to enter statements and expressions sequentially in the Python Shell window (interpreter).
- For work that requires more than a few steps, a better choice is to use a file.
- Python Files
 - If you want to save your work, you will need to create a file.
 - Files allow you to save commands and expressions and to execute them later.
 - **Used to create and save code.**
 - Files are text files.
 - Files are created and edited with the IDLE editor.

Python Files

- Creating and using Python files
 - To create a Python file:
`File -> New Window`
 - This will open the editing window where you may enter your Python statements/code.

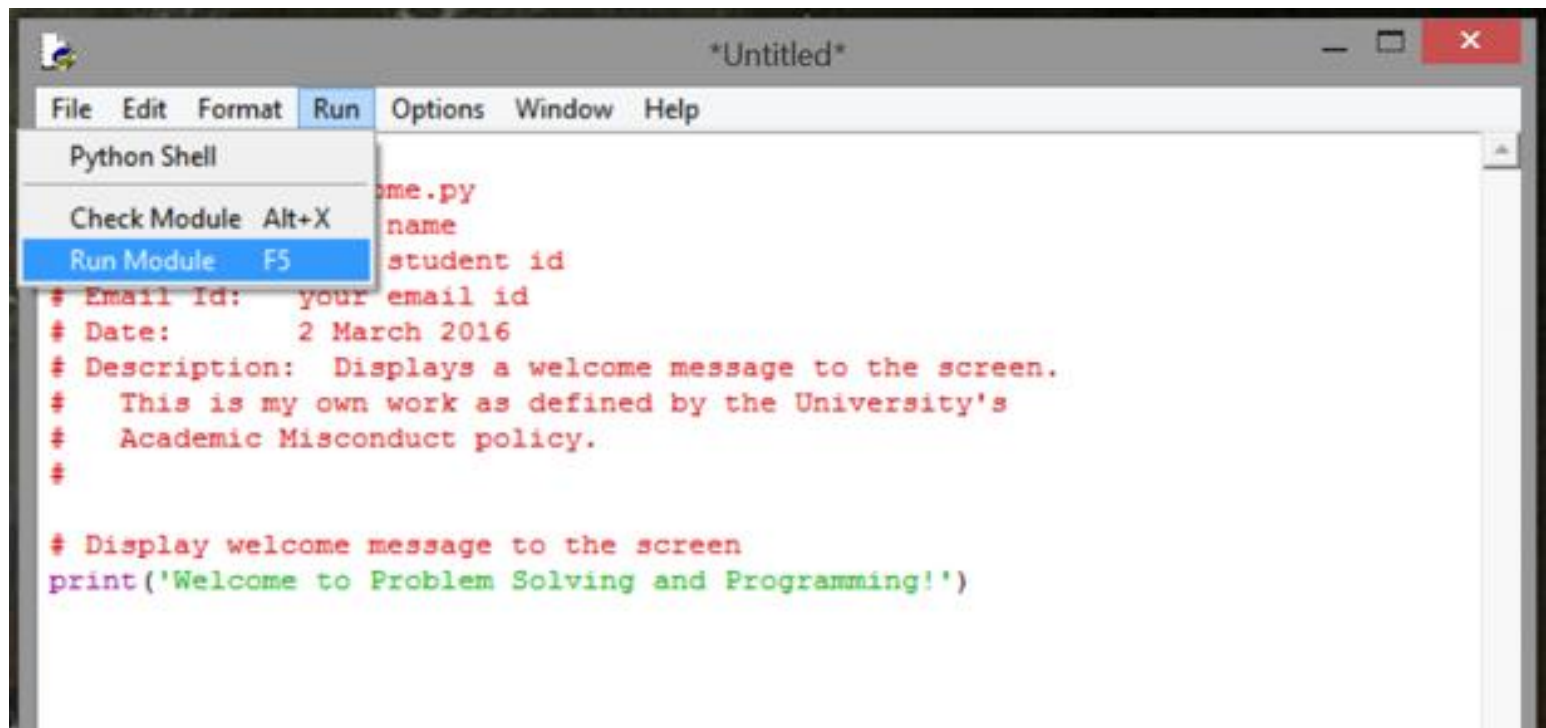


Python Files

- Creating and using Python Files
 - Once you have entered your Python program (statements/code), you may run it as seen below.

Run -> Run Module

- Must have a **.py** file extension.



Python Files

Example of file called `welcome.py`

```
#
# File:          welcome.py
# Author:        your name
# Student Id:    your student id
# Email Id:      your email id
# Date:          today's date
# Description:   Displays a welcome message to the screen.
#   This is my own work as defined by the University's
#   Academic Misconduct policy.
#

# Display welcome message to the screen
print('Welcome to Problem Solving and Programming!')
```

← Notice comment operator (#)

This produces the following output (Python Shell window):

```
Welcome to Problem Solving and Programming!
```

```
>>>
```

End

Getting Started with Python 