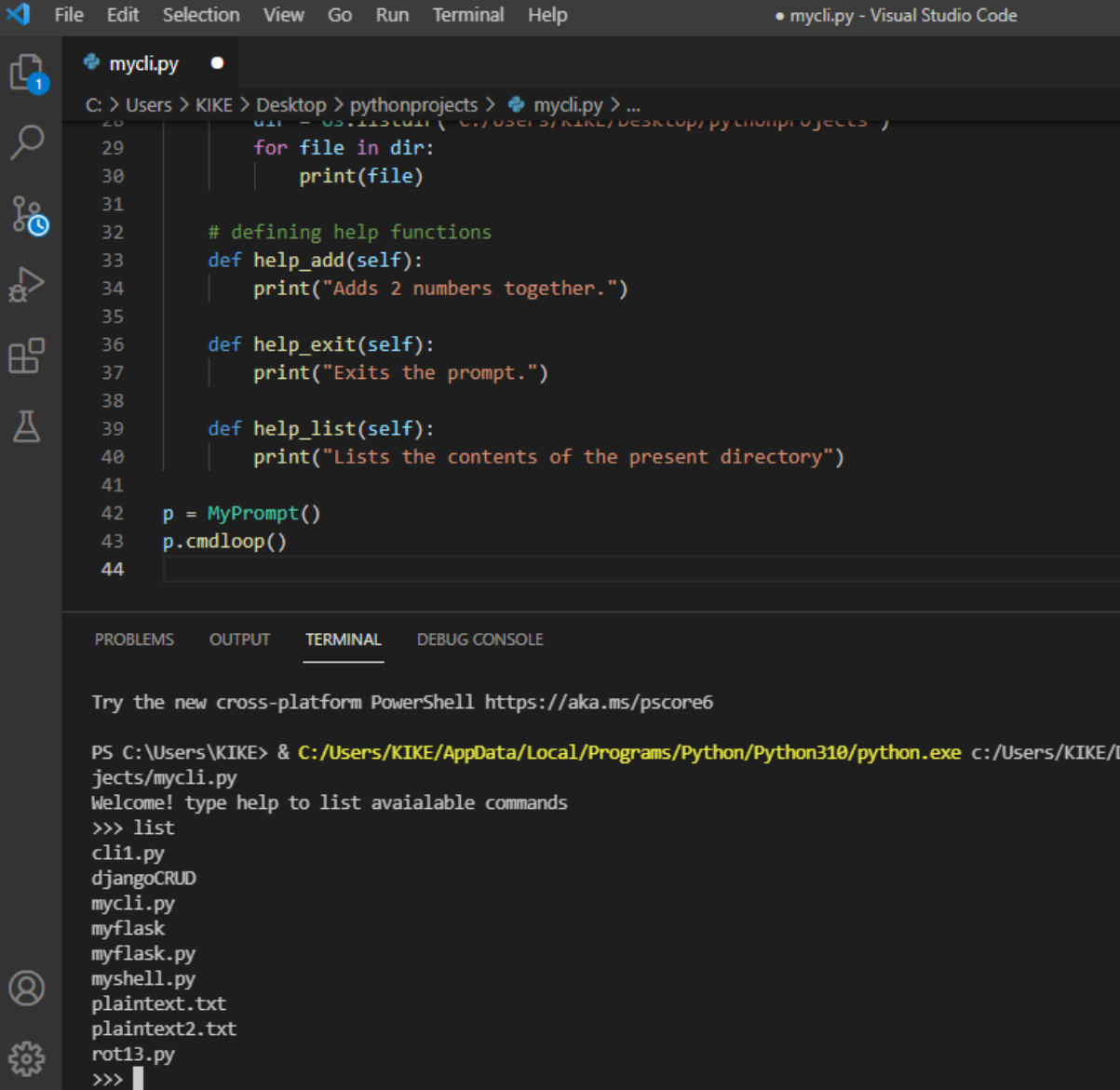


Unit 7 – Exploring a simple python shell

In this session, you will create a command shell in Python, and then run it and answer questions about it.

When you enter the command LIST it lists the contents of the current directory



The screenshot shows the Visual Studio Code editor with a file named `mycli.py` open. The code defines a simple command-line interface using the `MyPrompt` class. The `cmdloop` method is called to start the loop. Below the editor, the terminal window shows the execution of the script. The prompt is `Welcome! type help to list available commands`. The user enters `>>> list`, and the program outputs a list of files in the current directory: `cli1.py`, `djangoCRUD`, `mycli.py`, `myflask`, `myflask.py`, `myshell.py`, `plaintext.txt`, `plaintext2.txt`, and `rot13.py`. The prompt returns to `>>>`.

```
File Edit Selection View Go Run Terminal Help
mycli.py
C: > Users > KIKE > Desktop > pythonprojects > mycli.py > ...
28     self.cmdloop()
29     for file in dir:
30         print(file)
31
32     # defining help functions
33     def help_add(self):
34         print("Adds 2 numbers together.")
35
36     def help_exit(self):
37         print("Exits the prompt.")
38
39     def help_list(self):
40         print("Lists the contents of the present directory")
41
42     p = MyPrompt()
43     p.cmdloop()
44
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS C:\Users\KIKE> & C:/Users/KIKE/AppData/Local/Programs/Python/Python310/python.exe c:/Users/KIKE/Desktop/pythonprojects/mycli.py
Welcome! type help to list available commands
>>> list
cli1.py
djangoCRUD
mycli.py
myflask
myflask.py
myshell.py
plaintext.txt
plaintext2.txt
rot13.py
>>>
```

- The ADD command will add the following two numbers together and provide the result.

```

>>> add
5
2
'5' + '2' + equals '7'
>>> add
5
jhgkj
Invalid input, enter integers only
>>> 

```

- The HELP command provides a list of commands available

```

>>> help

Documented commands (type help <topic>):
=====
add  exit  help  list

>>> 

```

- The EXIT command exits the shell

```

Documented commands (type help <topic>):
=====
add  exit  help  list

>>> exit
come back soon!
PS C:\Users\KIKE> 

```

- What are the two main security vulnerabilities with your shell?
- What is one recommendation you would make to increase the security of the shell?
- Add a section to your e-portfolio that provides a (pseudo)code example of changes you would make to the shell to improve its security.