



# Python Challenge

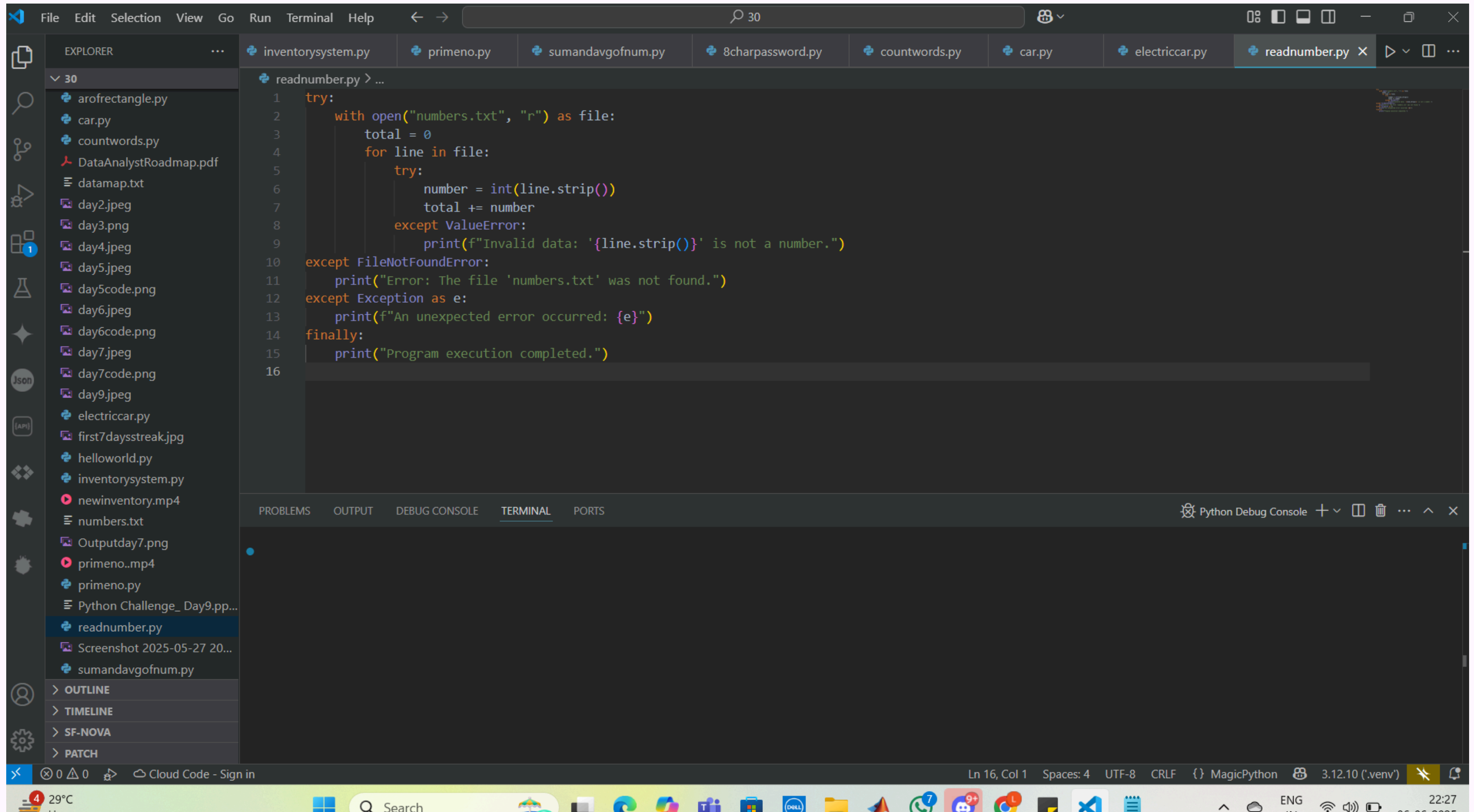
Day 10



# Exception Handling

- Exception Handling allows your program to deal with unexpected errors gracefully without crashing.
- **try** runs code that might cause an error.
- **except** handles specific errors (e.g., Value Error).
- **finally** always runs, used for cleanup.
- Helps avoid crashes and handle issues gracefully.

# Challenge: Read numbers from a file and handle errors gracefully



The image shows a screenshot of the Visual Studio Code (VS Code) editor interface. The Explorer panel on the left displays a file tree with various files, including Python scripts and image files. The file `readnumber.py` is selected and open in the main editor. The code in `readnumber.py` is a Python script that reads numbers from a file named `numbers.txt` and calculates their total. It includes error handling for `ValueError` (invalid data) and `FileNotFoundError` (file not found). The script also includes a `finally` block to print a completion message.

```
1 try:
2     with open("numbers.txt", "r") as file:
3         total = 0
4         for line in file:
5             try:
6                 number = int(line.strip())
7                 total += number
8             except ValueError:
9                 print(f"Invalid data: '{line.strip()}' is not a number.")
10    except FileNotFoundError:
11        print("Error: The file 'numbers.txt' was not found.")
12    except Exception as e:
13        print(f"An unexpected error occurred: {e}")
14    finally:
15        print("Program execution completed.")
16
```

The bottom of the VS Code window shows the status bar with the following information: `Ln 16, Col 1`, `Spaces: 4`, `UTF-8`, `CRLF`, `{ } MagicPython`, `3.12.10 (.venv)`. The Windows taskbar at the very bottom shows the system clock at `22:27` and the date `06.06.2025`.

# Output

The screenshot displays the Visual Studio Code interface. The Explorer sidebar on the left shows a project folder named '30' containing various files, including 'readnumber.py'. The main editor window shows the code for 'readnumber.py', which is a Python script designed to read numbers from a file named 'numbers.txt'. The script uses a try-except block to handle potential errors, such as a file not being found or invalid data being entered. The code is as follows:

```
1 try:
2     with open("numbers.txt", "r") as file:
3         total = 0
4         for line in file:
5             try:
6                 number = int(line.strip())
7                 total += number
8             except ValueError:
9                 print(f"Invalid data: '{line.strip()}' is not a number.")
10 except FileNotFoundError:
11     print("Error: The file 'numbers.txt' was not found.")
12 except Exception as e:
13     print(f"An unexpected error occurred: {e}")
14 finally:
15     print("Program execution completed.")
16
```

Below the code editor, the TERMINAL panel is active, showing the command prompt output. The command executed is:

```
PS C:\Users\laxmi\OneDrive\Desktop\30> & 'c:\Users\laxmi\OneDrive\Desktop\30\.venv\Scripts\python.exe' 'c:\Users\laxmi\.vscode\extensions\ms-python.debugpy-2025.8.0-win32-x64\bundled\libs\debugpy\launcher' '58743' '--' 'c:\Users\laxmi\OneDrive\Desktop\30\readnumber.py'
```

The output of the command is:

```
Error: The file 'numbers.txt' was not found.
Program execution completed.
```

The terminal also shows the prompt returning to the command line:

```
PS C:\Users\laxmi\OneDrive\Desktop\30>
```

FileEditSelectionViewGoRunTerminalHelp

30

EXPLORER

30

arofrectangle.py  
car.py  
countwords.py  
DataAnalystRoadmap.pdf  
datamap.txt  
day2.jpeg  
day3.png  
day4.jpeg  
day5.jpeg  
day5code.png  
day6.jpeg  
day6code.png  
day7.jpeg  
day7code.png  
day9.jpeg  
electriccar.py  
first7daysstreak.jpg  
helloworld.py  
inventorysystem.py  
newinventory.mp4  
numbers.txt  
Outputday7.png  
primeno..mp4  
primeno.py  
Python Challenge\_ Day9.pp...  
readnumber.py  
Screenshot 2025-05-27 20...  
sumandavgofnum.py

OUTLINE  
TIMELINE  
SF-NOVA  
PATCH

inventorysystem.py  
primeno.py  
sumandavgofnum.py  
8charpassword.py  
countwords.py  
car.py  
electriccar.py  
readnumber.py

readnumber.py > ...

1 try:  
2 with open("numbers.txt", "r") as file:  
3 total = 0  
4 for line in file:  
5 try:  
6 number = int(line.strip())  
7 total += number  
8 except ValueError:  
9 print(f"Invalid data: '{line.strip()}' is not a number.")  
10 except FileNotFoundError:  
11 print("Error: The file 'numbers.txt' was not found.")  
12 except Exception as e:  
13 print(f"An unexpected error occurred: {e}")  
14 finally:  
15 print("Program execution completed.")  
16

PROBLEMS  
OUTPUT  
DEBUG CONSOLE  
TERMINAL  
PORTS

Python Debug Console

PS C:\Users\laxmi\OneDrive\Desktop\30> & 'c:\Users\laxmi\OneDrive\Desktop\30\.venv\Scripts\python.exe' 'c:\Users\laxmi\.vscode\extensions\ms-python.debugpy-2025.8.0-win32-x64\bundled\libs\debugpy\launcher' '59101' '--' 'c:\Users\laxmi\OneDrive\Desktop\30\readnumber.py'

Invalid data: 'Prasanna' is not a number.  
Invalid data: 'Laxmi' is not a number.  
Invalid data: 'time' is not a number.  
Invalid data: '' is not a number.  
Program execution completed.

PS C:\Users\laxmi\OneDrive\Desktop\30>



**Thank  
You**