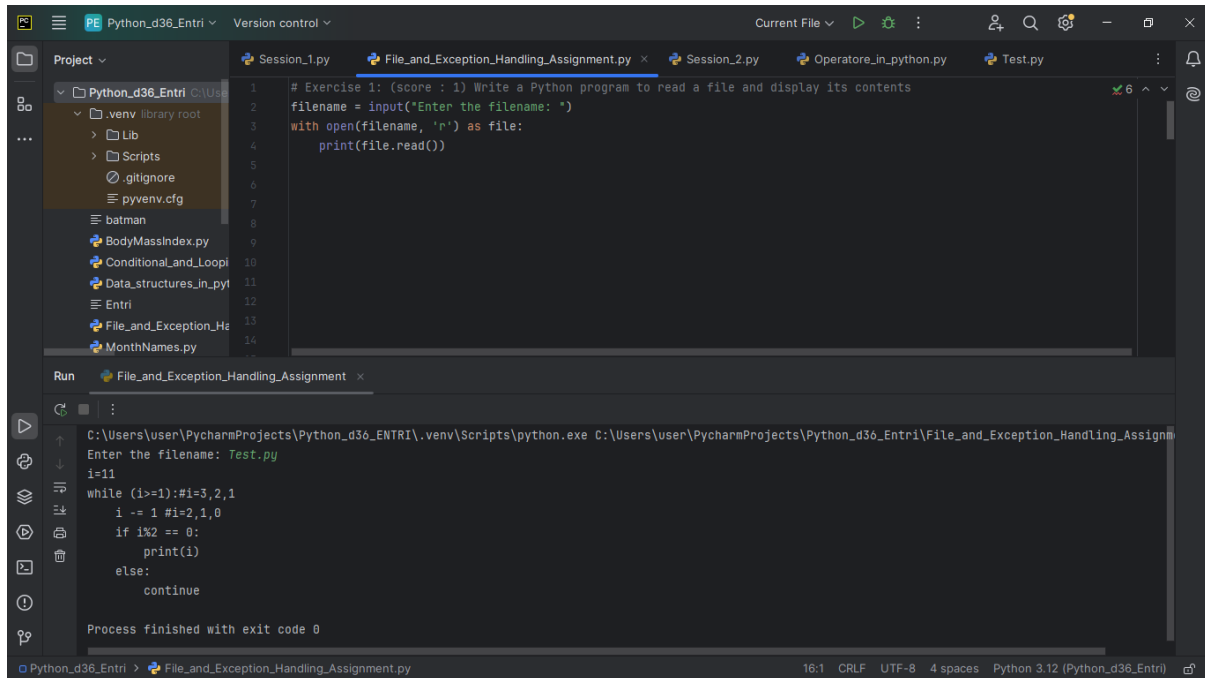


# PYTHON ASSIGNMENT - 5: FILE & EXCEPTION HANDLING

Exercise 1: Write a Python program to read a file and display its contents.

(i)



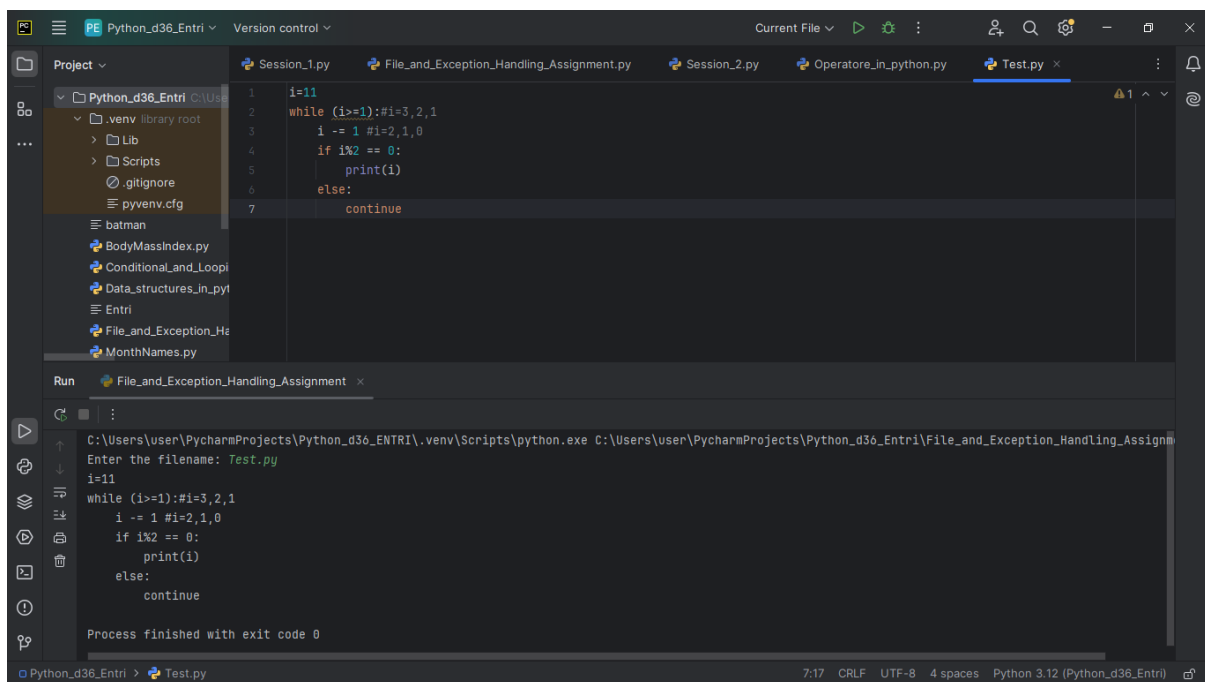
The screenshot shows the PyCharm IDE with a project named 'Python\_d36\_Entri'. The file explorer on the left shows a directory structure with files like 'Lib', 'Scripts', '.gitignore', 'pyvenv.cfg', 'batman', 'BodyMassIndex.py', 'Conditional\_and\_Loopi', 'Data\_structures\_in\_pyt', 'Entri', 'File\_and\_Exception\_Ha', and 'MonthNames.py'. The main editor window displays a Python script named 'File\_and\_Exception\_Handling\_Assignment.py' with the following code:

```
1 # Exercise 1: (score : 1) Write a Python program to read a file and display its contents
2 filename = input("Enter the filename: ")
3 with open(filename, 'r') as file:
4     print(file.read())
```

The Run window at the bottom shows the execution of the program. The command prompt displays the following output:

```
C:\Users\user\PycharmProjects\Python_d36_ENTRI\.venv\Scripts\python.exe C:\Users\user\PycharmProjects\Python_d36_Entri\File_and_Exception_Handling_Assignm
Enter the filename: Test.py
i=11
while (i>=1):#i=3,2,1
    i -= 1 #i=2,1,0
    if i%2 == 0:
        print(i)
    else:
        continue
Process finished with exit code 0
```

(ii)



The screenshot shows the PyCharm IDE with a project named 'Python\_d36\_Entri'. The file explorer on the left shows a directory structure with files like 'Lib', 'Scripts', '.gitignore', 'pyvenv.cfg', 'batman', 'BodyMassIndex.py', 'Conditional\_and\_Loopi', 'Data\_structures\_in\_pyt', 'Entri', 'File\_and\_Exception\_Ha', and 'MonthNames.py'. The main editor window displays a Python script named 'Test.py' with the following code:

```
1 i=11
2 while (i>=1):#i=3,2,1
3     i -= 1 #i=2,1,0
4     if i%2 == 0:
5         print(i)
6     else:
7         continue
```

The Run window at the bottom shows the execution of the program. The command prompt displays the following output:

```
C:\Users\user\PycharmProjects\Python_d36_ENTRI\.venv\Scripts\python.exe C:\Users\user\PycharmProjects\Python_d36_Entri\File_and_Exception_Handling_Assignm
Enter the filename: Test.py
i=11
while (i>=1):#i=3,2,1
    i -= 1 #i=2,1,0
    if i%2 == 0:
        print(i)
    else:
        continue
Process finished with exit code 0
```

Exercise 2: Write a Python program to copy the contents of one file to another file.

(i)

The screenshot shows the PyCharm IDE with a project named 'Python\_d36\_Entri'. The file explorer on the left shows the project structure. The main editor displays a Python file named 'File\_and\_Exception\_Handling\_Assignment.py' with the following code:

```
7 # Exercise 2: (score : 1) Write a Python program to copy the contents of one file to another file
8 source_file = input("Enter the source file name: ")
9 destination_file = input("Enter the destination file name: ")
10 with open(source_file, 'r') as src:
11     with open(destination_file, 'w') as dst:
12         dst.write(src.read())
13 print("File copied successfully.")
14
15
16
17
18
19
```

The Run window at the bottom shows the execution of the program. The command prompt displays the following output:

```
C:\Users\User\PycharmProjects\Python_d36_ENTRI\.venv\Scripts\python.exe C:\Users\User\PycharmProjects\Python_d36_ENTRI\File_and_Exception_Handling_Assignment.py
Enter the source file name: Test.py
Enter the destination file name: PAS TEST.py
File copied successfully.
Process finished with exit code 0
```

(ii)

The screenshot shows the PyCharm IDE with the same project. The file explorer on the left shows the project structure. The main editor displays a Python file named 'PAS TEST.py' with the following code:

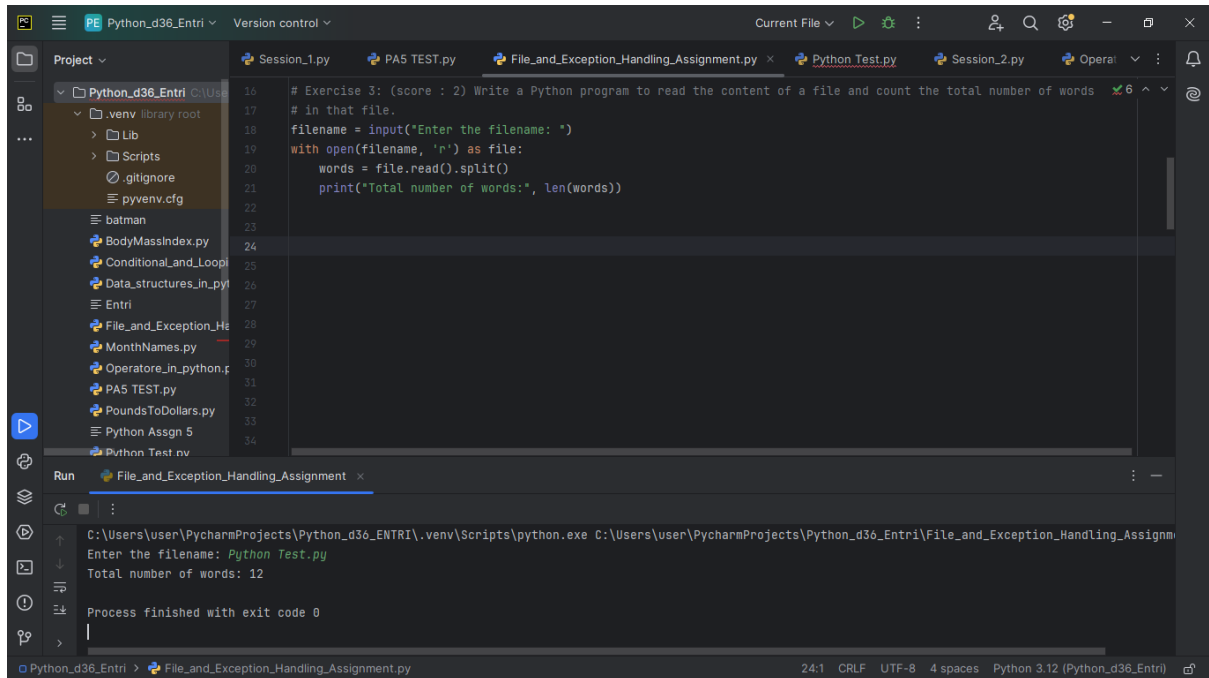
```
1 i=11
2 while (i>=1):#i=3,2,1
3     i -= 1 #i=2,1,0
4     if i%2 == 0:
5         print(i)
6     else:
7         continue
```

The Run window at the bottom shows the execution of the program. The command prompt displays the following output:

```
C:\Users\User\PycharmProjects\Python_d36_ENTRI\.venv\Scripts\python.exe C:\Users\User\PycharmProjects\Python_d36_ENTRI\PAS TEST.py
Enter the source file name: Test.py
Enter the destination file name: PAS TEST.py
File copied successfully.
Process finished with exit code 0
```

Exercise 3: Write a Python program to read the content of a file and count the total number of words in that file.

(Code & Output :)



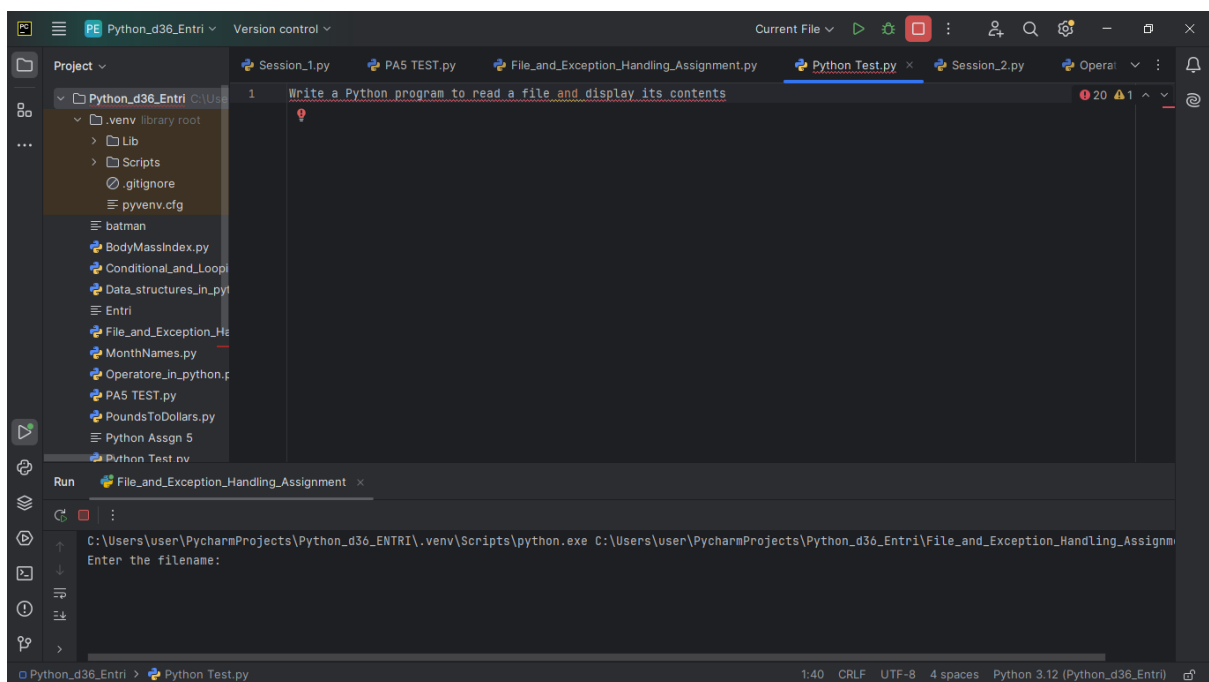
The screenshot shows the PyCharm IDE with the file `File_and_Exception_Handling_Assignment.py` open. The code is as follows:

```
16 # Exercise 3: (score : 2) Write a Python program to read the content of a file and count the total number of words
17 # in that file.
18 filename = input("Enter the filename: ")
19 with open(filename, 'r') as file:
20     words = file.read().split()
21     print("Total number of words:", len(words))
22
23
24
25
26
27
28
29
30
31
32
33
34
```

The Run window shows the output of the program:

```
Enter the filename: Python Test.py
Total number of words: 12
Process finished with exit code 0
```

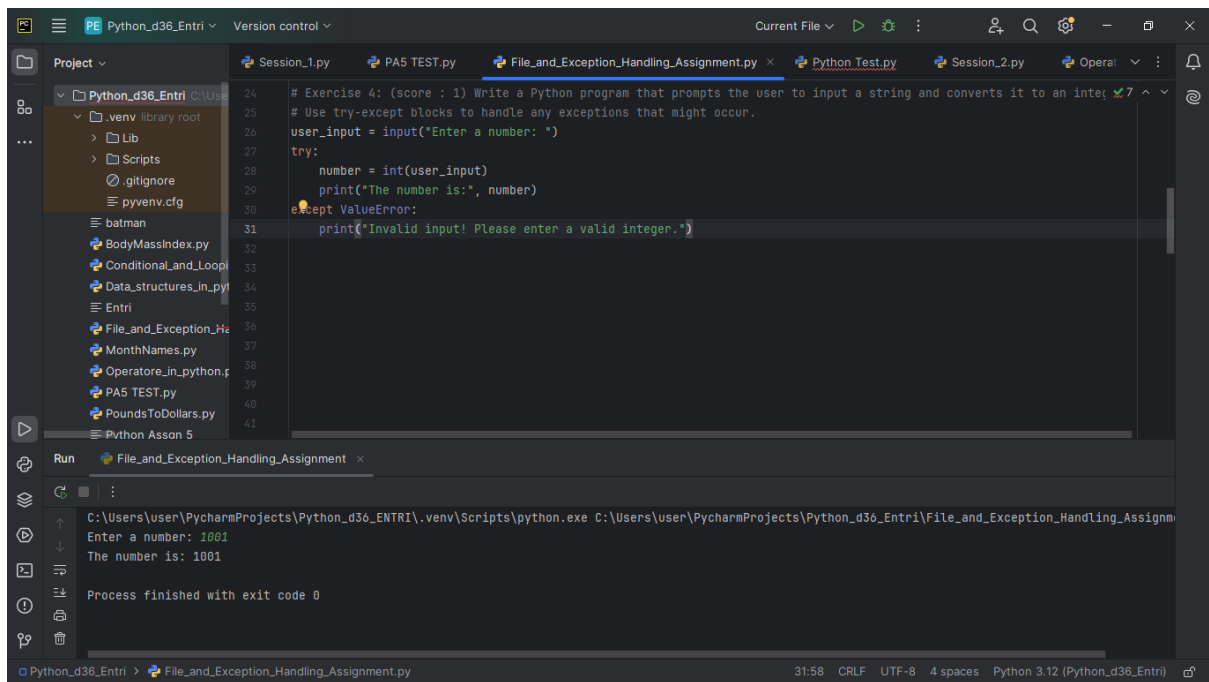
(Content in the Python Test.py file :)



The screenshot shows the PyCharm IDE with the file `Python Test.py` open. The content of the file is:

```
1 Write a Python program to read a file and display its contents
```

Exercise 4: Write a Python program that prompts the user to input a string and converts it to an integer. Use try-except blocks to handle any exceptions that might occur.



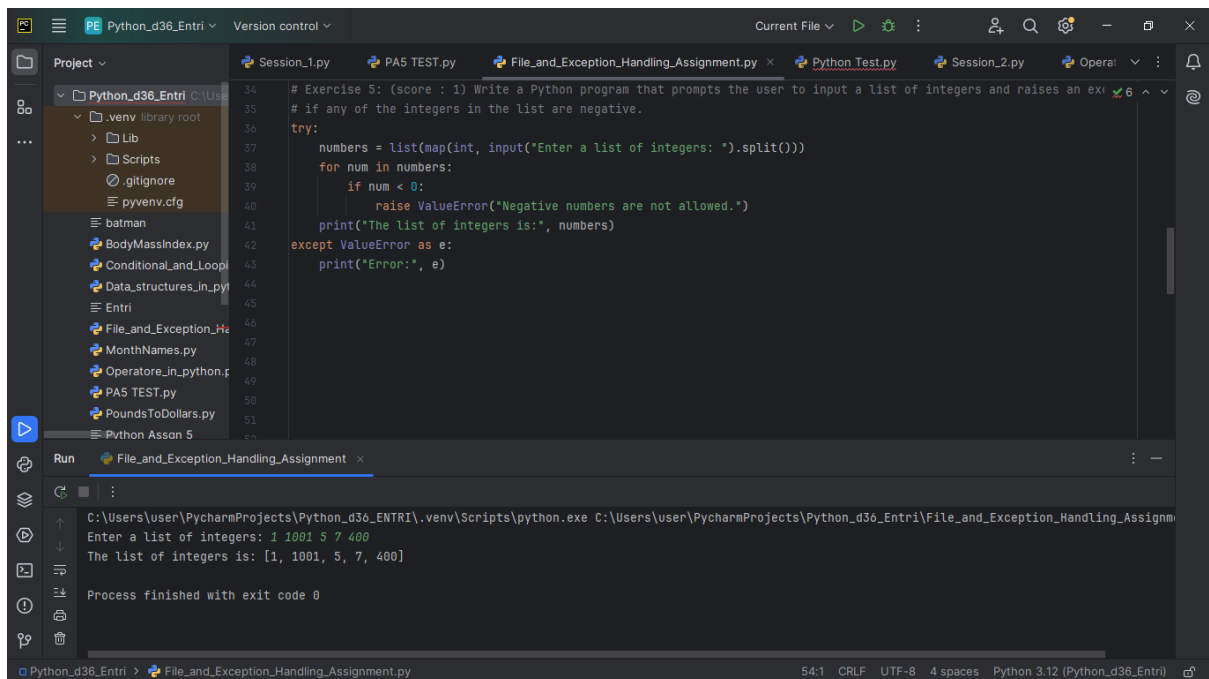
```
# Exercise 4: (score : 1) Write a Python program that prompts the user to input a string and converts it to an integer.
# Use try-except blocks to handle any exceptions that might occur.
user_input = input("Enter a number: ")
try:
    number = int(user_input)
    print("The number is:", number)
except ValueError:
    print("Invalid input! Please enter a valid integer.")
```

Run: File\_and\_Exception\_Handling\_Assignment

```
C:\Users\user\PycharmProjects\Python_d36_ENTRI\.venv\Scripts\python.exe C:\Users\user\PycharmProjects\Python_d36_ENTRI\File_and_Exception_Handling_Assignment.py
Enter a number: 1001
The number is: 1001
Process finished with exit code 0
```

Exercise 5: Write a Python program that prompts the user to input a list of integers and raises an exception if any of the integers in the list are negative.

(i)

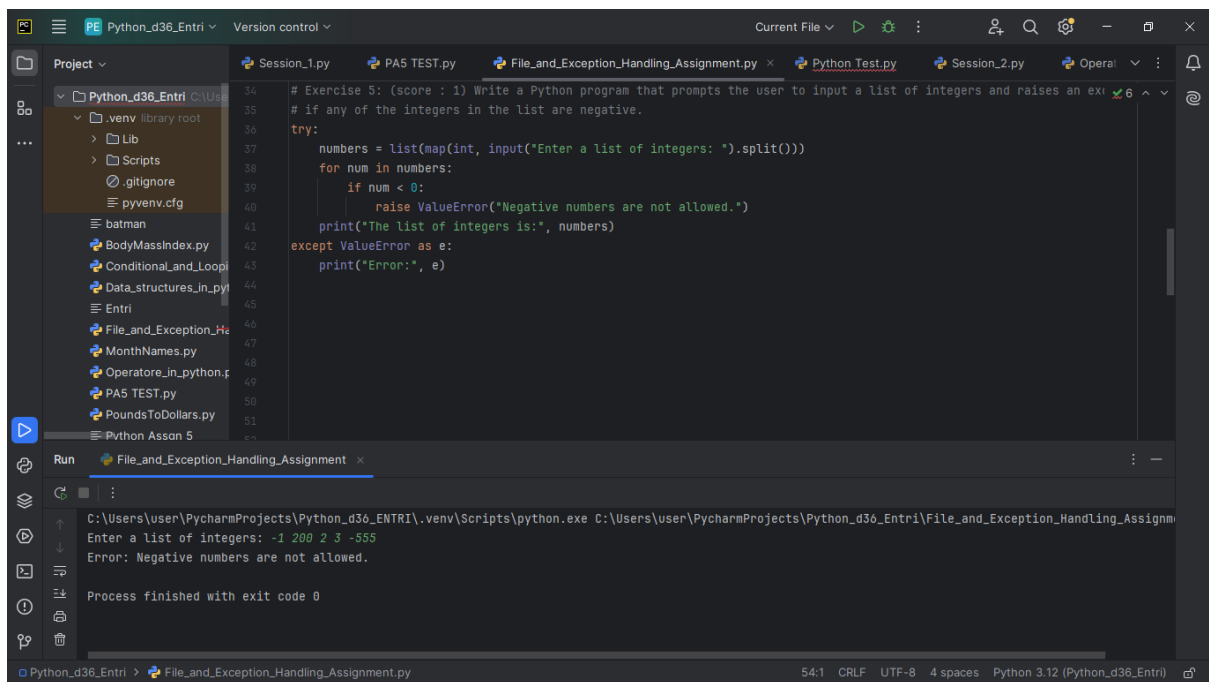


```
# Exercise 5: (score : 1) Write a Python program that prompts the user to input a list of integers and raises an exception if any of the integers in the list are negative.
try:
    numbers = list(map(int, input("Enter a list of integers: ").split()))
    for num in numbers:
        if num < 0:
            raise ValueError("Negative numbers are not allowed.")
    print("The list of integers is:", numbers)
except ValueError as e:
    print("Error:", e)
```

Run: File\_and\_Exception\_Handling\_Assignment

```
C:\Users\user\PycharmProjects\Python_d36_ENTRI\.venv\Scripts\python.exe C:\Users\user\PycharmProjects\Python_d36_ENTRI\File_and_Exception_Handling_Assignment.py
Enter a list of integers: 1 1001 5 7 400
The list of integers is: [1, 1001, 5, 7, 400]
Process finished with exit code 0
```

(ii)



```
# Exercise 5: (score : 1) Write a Python program that prompts the user to input a list of integers and raises an exception if any of the integers in the list are negative.
try:
    numbers = list(map(int, input("Enter a list of integers: ").split()))
    for num in numbers:
        if num < 0:
            raise ValueError("Negative numbers are not allowed.")
    print("The list of integers is:", numbers)
except ValueError as e:
    print("Error:", e)
```

Run: File\_and\_Exception\_Handling\_Assignment

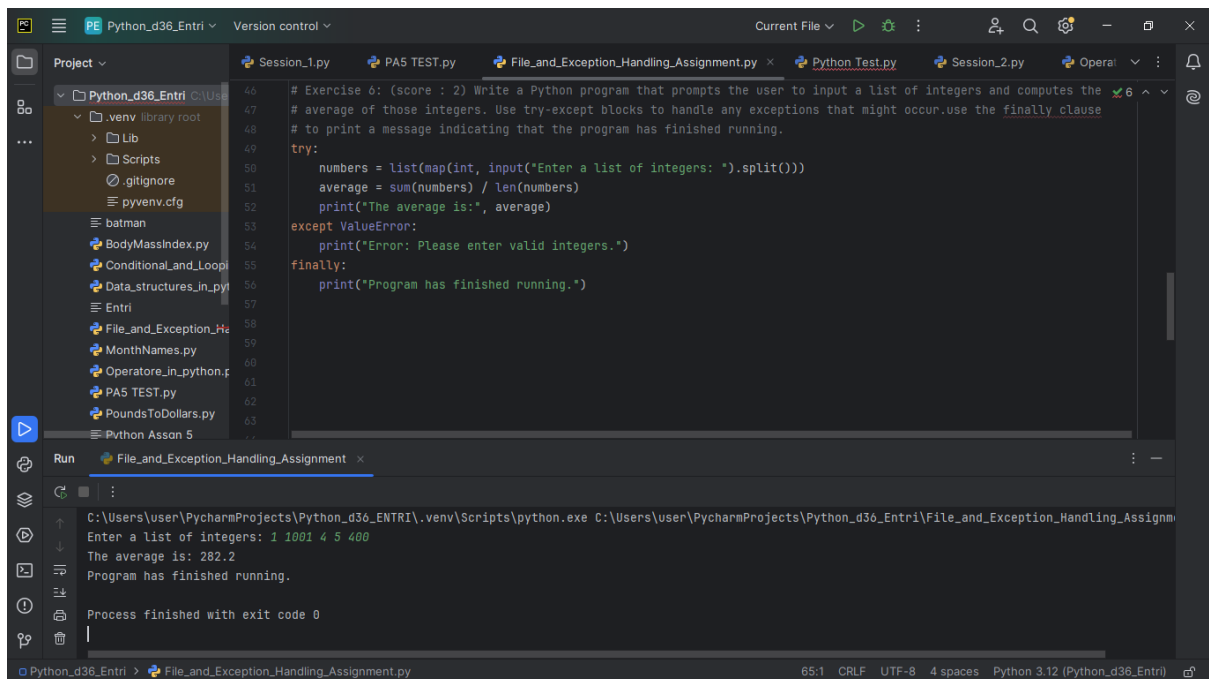
C:\Users\user\PycharmProjects\Python\_d36\_ENTRI\.venv\Scripts\python.exe C:\Users\user\PycharmProjects\Python\_d36\_ENTRI\File\_and\_Exception\_Handling\_Assignment.py

Enter a list of integers: -1 200 2 3 -555

Error: Negative numbers are not allowed.

Process finished with exit code 0

Exercise 6: Write a Python program that prompts the user to input a list of integers and computes the average of those integers. Use try-except blocks to handle any exceptions that might occur. Use the finally clause to print a message indicating that the program has finished running.



```
# Exercise 6: (score : 2) Write a Python program that prompts the user to input a list of integers and computes the average of those integers. Use try-except blocks to handle any exceptions that might occur. Use the finally clause to print a message indicating that the program has finished running.
try:
    numbers = list(map(int, input("Enter a list of integers: ").split()))
    average = sum(numbers) / len(numbers)
    print("The average is:", average)
except ValueError:
    print("Error: Please enter valid integers.")
finally:
    print("Program has finished running.")
```

Run: File\_and\_Exception\_Handling\_Assignment

C:\Users\user\PycharmProjects\Python\_d36\_ENTRI\.venv\Scripts\python.exe C:\Users\user\PycharmProjects\Python\_d36\_ENTRI\File\_and\_Exception\_Handling\_Assignment.py

Enter a list of integers: 1 1001 4 5 400

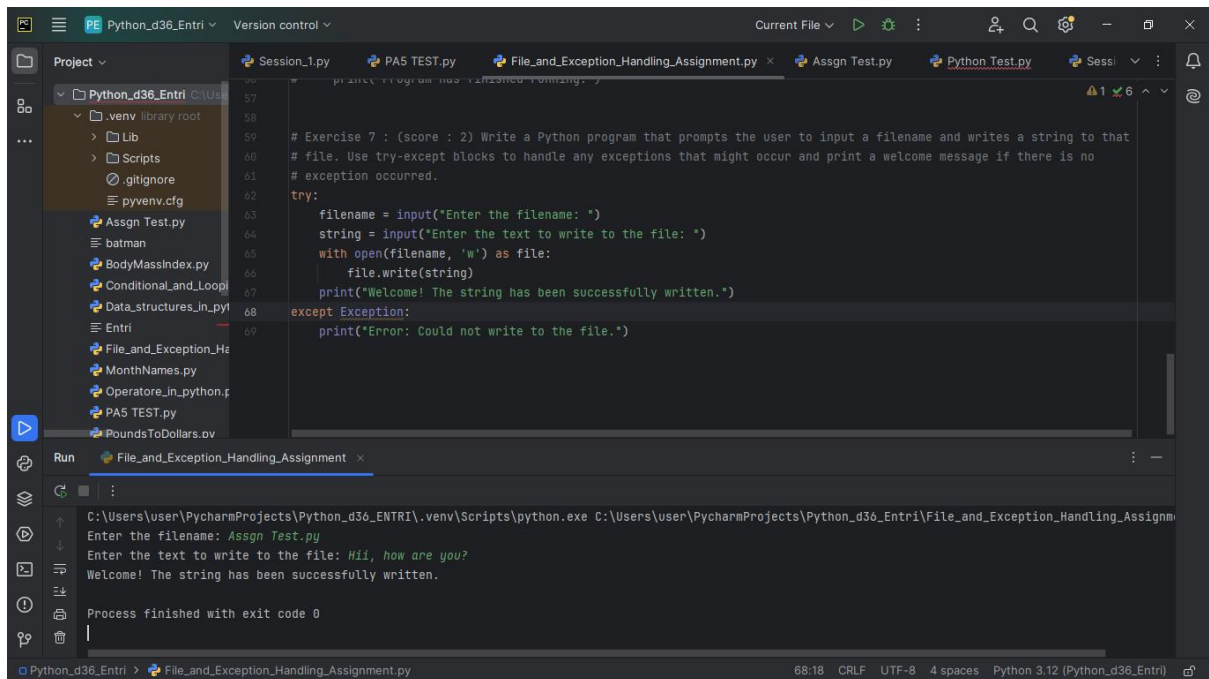
The average is: 282.2

Program has finished running.

Process finished with exit code 0

Exercise 7: Write a Python program that prompts the user to input a filename and writes a string to that file. Use try-except blocks to handle any exceptions that might occur and print a welcome message if there is no exception occurred.

(i)



```
57 print("Program has finished running.")
58
59 # Exercise 7 : (score : 2) Write a Python program that prompts the user to input a filename and writes a string to that
60 # file. Use try-except blocks to handle any exceptions that might occur and print a welcome message if there is no
61 # exception occurred.
62 try:
63     filename = input("Enter the filename: ")
64     string = input("Enter the text to write to the file: ")
65     with open(filename, 'w') as file:
66         file.write(string)
67     print("Welcome! The string has been successfully written.")
68 except Exception:
69     print("Error: Could not write to the file.")
```

Run File\_and\_Exception\_Handling\_Assignment

C:\Users\User\PycharmProjects\Python\_d36\_ENTRI\.venv\Scripts\python.exe C:\Users\User\PycharmProjects\Python\_d36\_ENTRI\File\_and\_Exception\_Handling\_Assignment.py

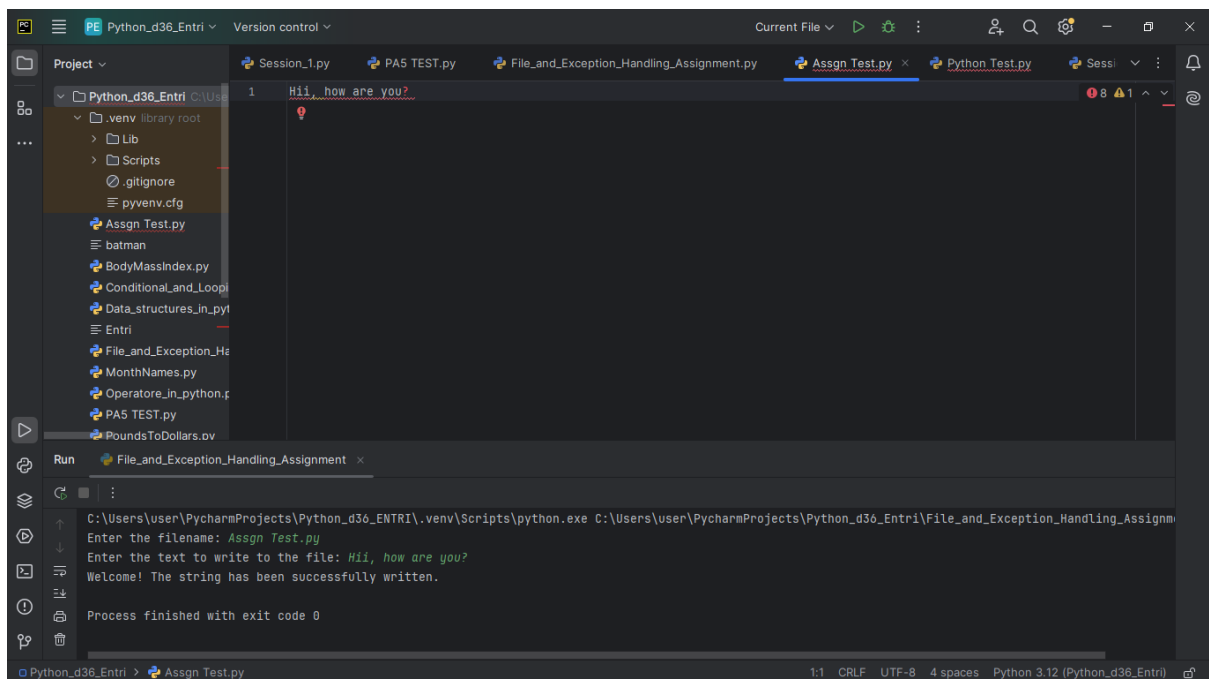
Enter the filename: Assign Test.py

Enter the text to write to the file: Hii, how are you?

Welcome! The string has been successfully written.

Process finished with exit code 0

(ii)



```
1 Hii, how are you?
```

Run File\_and\_Exception\_Handling\_Assignment

C:\Users\User\PycharmProjects\Python\_d36\_ENTRI\.venv\Scripts\python.exe C:\Users\User\PycharmProjects\Python\_d36\_ENTRI\File\_and\_Exception\_Handling\_Assignment.py

Enter the filename: Assign Test.py

Enter the text to write to the file: Hii, how are you?

Welcome! The string has been successfully written.

Process finished with exit code 0

