**Week 8 - Lab B**

### **Problem 1: Bank Balance Check**

**Write a Python program that simulates a bank balance check. The program should:**

1. **Prompt the user to enter an amount they want to withdraw from their account.**
2. **Raise a ValueError with a message "You don't have enough money" if the withdrawal amount exceeds the balance of $200.**
3. **If the withdrawal is successful, update the balance and print the remaining balance.**
4. **Use a try-except block to handle exceptions and print a user-friendly error message.**

Paste your source code below:

balance: int = 200

try:

withdraw = int(input("Withdraw Amount: $"))

balance -= withdraw

if balance < 0:

raise ValueError("You don't have enough money!")

except ValueError as e:

print(f"Error: {e}")

else:

print("Withdraw successful!")

print(f"Your current balance is ${balance}.")

Paste the Screenshot of your output below:

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ python3 p1.py

Withdraw Amount: $500

Error: You don't have enough money!

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ python3 p1.py

Withdraw Amount: $95

Withdraw successful!

Your current balance is $105.

### **Problem 2: File Reading**

**Write a Python program that:**

1. **Tries to open a file named data.txt for reading.**
2. **If the file does not exist, catch the FileNotFoundError exception and print "The file was not found."**
3. **If the file opens successfully, read and print its contents.**
4. **Ensure that the file is closed properly after the operation.**

Paste your source code below:

try:

with open("data.txt", "r") as f:

content = f.read()

print(content, end=('' if content[-1] == '\n' else '\n'))

except FileNotFoundError:

print("The file was not found.")

Paste the Screenshot of your output below:

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ l

Week 9 - Lab A.docx p2.py p3.py

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ python3 p2.py

The file was not found.

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ echo Hello, World! > data.txt

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ l

Week 9 - Lab A.docx data.txt p2.py p3.py

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ cat data.txt

Hello, World!

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ python3 p2.py

Hello, World!

### **Problem 3: Multiple Exception Handling**

**Write a Python program that:**

1. **Takes user input for two numbers and attempts to perform addition, subtraction, multiplication, and division on them.**
2. **Use a try-except block to handle:**
   * **ZeroDivisionError if the second number is zero during division.**
   * **TypeError if the user inputs non-numeric values.**
3. **Print appropriate error messages for each exception.**
4. **Ensure that the program always ends with a message stating "All operations complete." in a finally block.**

Paste your source code below:

try:

a = float(input("First Number: "))

b = float(input("Second Number: "))

print(f"{a} + {b} = {a + b}")

print(f"{a} - {b} = {a - b}")

print(f"{a} \* {b} = {a \* b}")

print(f"{a} / {b} = {a / b}")

except ValueError:

print("Error: Inputs must be numbers!")

except ZeroDivisionError:

print("Error: Divisor cannot be 0!")

finally:

print("All operations complete.")

Paste the Screenshot of your output below:

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ python3 p3.py

First Number: 1

Second Number: a

Error: Inputs must be numbers!

All operations complete.

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ python3 p3.py

First Number: 1

Second Number: 0

1.0 + 0.0 = 1.0

1.0 - 0.0 = 1.0

1.0 \* 0.0 = 0.0

Error: Divisor cannot be 0!

All operations complete.

**whitewolfzhang@White**:**~/Library/CloudStorage/OneDrive-Personal/Documents/Acadamic/OCC/F2024/CS\_131/Codes/Week 9-A Lab**$ python3 p3.py

First Number: 1

Second Number: 0.5

1.0 + 0.5 = 1.5

1.0 - 0.5 = 0.5

1.0 \* 0.5 = 0.5

1.0 / 0.5 = 2.0

All operations complete.