

Lab Week 3 - Loops and Conditional

Skills Needed to complete this Lab

- Loops - For and While
- Conditionals.

KC Bank

Objective: Create a Python program that simulates a simple bank account. The program should allow users to perform basic banking operations such as deposit, withdrawal, and checking the balance. The simulation should continue until the user chooses to exit.

Instructions:

1. Initialize the bank account balance to a default value (\$1000).
2. Use a `while` loop to repeatedly display a menu of banking operations until the user chooses to exit.
3. Within the loop:
 - Display the following menu:

KC Bank:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
 - Ask the user to choose an option by entering the corresponding number.
4. Use a `for` loop to limit the number of attempts for entering a valid option. If the user fails to enter a valid option within the specified attempts, end the program. "The user has 3 attempts."
5. If the user enters a valid option:
 - For deposit and withdrawal, prompt the user to enter the amount.
 - Update the bank account balance accordingly.
 - For withdrawal, check if the withdrawal amount is available; if not, display an error message.
6. After each operation, ask the user if they want to perform another banking operation. If they choose to exit, end the program.

Sample outputs:

```
File Edit Shell Debug Options Window Help
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:20:19) [
Type "help", "copyright", "credits" or "license()" for more
>>>
=== RESTART: C:/Users/zeineldinm/Box/CS101Lab2024NEW/Week 3
Welcome to KC Bank!

Bank Account Balance: $1000.00

KC Bank Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an operation (1-4): 5
Invalid option. Please enter a number between 1 and 4.
You used 1 attempt(s)
Choose an operation (1-4): 6
Invalid option. Please enter a number between 1 and 4.
You used 2 attempt(s)
Choose an operation (1-4): 5
Invalid option. Please enter a number between 1 and 4.
You used 3 attempt(s)

Exceeded maximum attempts (3). Exiting the Bank Account.
>>> |
```

```
File Edit Shell Debug Options Window Help
=== RESTART: C:/Users/zeineldinm/Box/CS101Lab2024NEW/Week 3/Week3_Solution.py ==
Welcome to KC Bank!

Bank Account Balance: $1000.00

KC Bank Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an operation (1-4): 1
Enter the deposit amount: 250.5
Deposit successful. New balance: $1250.50
Bank Account Balance: $1250.50

KC Bank Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an operation (1-4): 2
Enter the withdrawal amount: 1300
Error: Insufficient funds. Withdrawal amount exceeds the current balance.
Bank Account Balance: $1250.50

KC Bank Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an operation (1-4): 2
Enter the withdrawal amount: 100
Withdrawal successful. New balance: $1150.50
Bank Account Balance: $1150.50
```

```
File Edit Shell Debug Options Window Help
>>>
=== RESTART: C:/Users/zeineldinm/Box/CS101Lab2
Welcome to KC Bank!

Bank Account Balance: $1000.00

KC Bank Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an operation (1-4): 3
Current balance: $1000.00
Bank Account Balance: $1000.00

KC Bank Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an operation (1-4): 1
Enter the deposit amount: 100
Deposit successful. New balance: $1100.00
Bank Account Balance: $1100.00

KC Bank Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an operation (1-4): 4

Exiting KC Bank. Thank you!
>>> |
```

Grading and Turning In

Turn in your program before the end of the lab. Upload the .py file and the screenshots of the output to GitHub and submit the link on Canvas.