Midterm Lab Task 2

TAYTING, JUSTINE JAY D.

Problem 1.

Create an n x n Multiplication table using Nested FOR Loop. The user must enter the number of rows and columns that will be displayed in the Table.

Code

```
rows = int(input("How many rows: "))
cols = int(input("How many Cols: "))
print("----------------- Multiplication Table ----------------------")
for rows in range(1, rows+1):
        for cols in range(1, cols+1):
            print(f" {rows*cols:5d}", end="")
        print ("\n")
```

Sample Output 1

```
How many rows: 10
How many Cols: 10
----------------- Multiplication Table --------------------
    1    2    3    4    5    6    7    8    9   10

    2    4    6    8   10   12   14   16   18   20

    3    6    9   12   15   18   21   24   27   30

    4    8   12   16   20   24   28   32   36   40

    5   10   15   20   25   30   35   40   45   50

    6   12   18   24   30   36   42   48   54   60

    7   14   21   28   35   42   49   56   63   70

    8   16   24   32   40   48   56   64   72   80

    9   18   27   36   45   54   63   72   81   90

   10   20   30   40   50   60   70   80   90  100
```

Sample Output 2.

```
How many rows: 5
How many Cols: 5
---------------- Multiplication Table --------------------
     1     2     3     4     5

     2     4     6     8    10

     3     6     9    12    15

     4     8    12    16    20

     5    10    15    20    25
```

Problem 2.

Create a bank program that will allow the user to perform the ff: Use Functions as necessary

```
def show_balance(balance):
    print("********************************")
    print(f"Your balance is ${balance:.2f}")
    print("********************************")

def deposit(balance):
   amount = float(input("Enter an amount to be deposited: "))
   if amount > 0:
       balance +=amount
   else:
       print("Invalid amount!")
   return balance


def withdraw(balance):
   amount = float(input("Enter an amount to be withdrawn: "))
   if amount > balance:
       print("Insufficient funds!!!")
   elif amount <= 0:
       print("Invalid amount! Amount must be greater than 0.")
   else:
       balance -= amount
   return balance


def main():
   balance = 0
   while True:
       print("********************")
       print("     XYZ ATM      ")
```

```
        print("********************")
        print("1. Show Balance")
        print("2. Deposit")
        print("3. Withdraw")
        print("4. Exit")
        print("********************")
        choice = int(input("Enter your choice (1-4): "))


        if choice == 1:
            show_balance(balance)
        elif choice == 2:
            balance = deposit(balance)
        elif choice == 3:
            balance = withdraw(balance)
        elif choice == 4:
            print("Exiting Program.")
            break
        else:
            print("***********************************")
            print("Invalid input! Select a valid option.")
            print("***********************************")
    print("***********************************")
    print("    Thank you for using XYZ ATM    ")
    print("***********************************")


main()
```

Sample Output

```
********************
     XYZ ATM
********************
1. Show Balance
2. Deposit
3. Withdraw
4. Exit
********************
```

```
Enter your choice (1-4): 1
********************************
Your balance is $0.00
********************************
```

```
Enter your choice (1-4): 2
Enter an amount to be deposited: 1000
```

```
Enter your choice (1-4): 1
********************************
Your balance is $1000.00
********************************
```

```
Enter your choice (1-4): 3
Enter an amount to be withdrawn: 350
```

```
Enter your choice (1-4): 1
********************************
Your balance is $650.00
********************************
```