Midterm Lab Task 2
Using Functions

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.

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:3
How many cols:5
               Multiplication Table

   1   2   3   4   5

   2   4   6   8  10

   3   6   9  12  15
```

Problem 2. Create a bank program that will allow the user to perform the ff: Use Functions as necessary

```
**********************
      ABCCDE 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Enter amount to be withdrawn: 250
**********************
```

```
**********************
Enter your choice (1-4): 1
**********************
Your balance is $750.00
**********************
```

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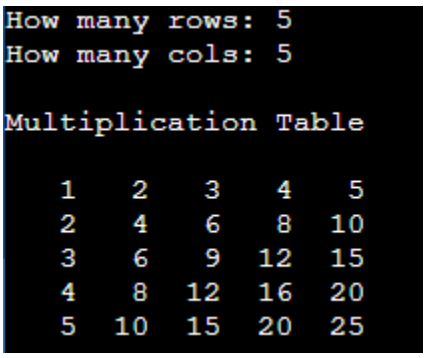
Problem #1

```
def table(rows, cols):
    print("\nMultiplication Table\n")
    for a in range(1, rows + 1):
        for b in range(1, cols + 1):
            print(f"{a * b:4}", end="")
        print()

rows = int(input("How many rows: "))
cols = int(input("How many cols: "))
table(rows, cols)
```

Sample Output #1



Problem #2

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

def deposit(balance):
    amount = float(input("Enter an amount to be deposited: "))
    balance += amount
    return balance

def withdraw(balance):
    amount = float(input("Enter amount to be withdrawn: "))
    if amount > balance:
        print("Insufficient funds!")
    else:
        balance -= amount
    return balance

def atm():
    balance = 0.0
    while True:
        print("\n************************")
        print("     ANGELES ATM")
        print("************************")
        print("1. Show Balance")
        print("2. Deposit")
        print("3. Withdraw")
        print("4. Exit")
        print("************************")

        choice = input("Enter your choice (1-4): ")

        if choice == "1":
            showbal(balance)
        elif choice == "2":
```

Sample Output #2

```
************************
     ANGELES ATM
************************
1. Show Balance
2. Deposit
3. Withdraw
4. Exit
************************
Enter your choice (1-4): 2
Enter an amount to be deposited: 123123

************************
     ANGELES ATM
************************
1. Show Balance
2. Deposit
3. Withdraw
4. Exit
************************
Enter your choice (1-4): 1
************************
Your balance is $123123.00
************************

************************
     ANGELES ATM
************************
1. Show Balance
2. Deposit
3. Withdraw
4. Exit
************************
Enter your choice (1-4): 3
Enter amount to be withdrawn: 123122
```

```
            balance = deposit(balance)
        elif choice == "3":
            balance = withdraw(balance)
        elif choice == "4":
            print("Thank you for using ANGELES ATM!")
            break
        else:
            print("Invalid choice, try again.")
atm()
```