

700P MIDTERM LAB TASK #2

PROBLEM:

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

CODE:

```
usage
def print_multiplication_table(rows, cols):
    print("\nMultiplication Table\n")
    for i in range(1, rows + 1):
        for j in range(1, cols + 1):
            print(f"{i * j:4}", end="") # print each value with padding for alignment
        print() # print new line after each row

usage
def main():
    rows = int(input("How many rows?: "))
    cols = int(input("How many cols?: "))

    print_multiplication_table(rows, cols)

if __name__ == "__main__":
    main()
```

SAMPLE OUTPUT:

```
C:\Users\COMLAB\PycharmProjects\pythonProject2\venv\Scripts\python.exe "C:\Users\COMLAB\PycharmProjects\pythonProject2\Le Activity.py"
How many rows?: 13
How many cols?: 13

Multiplication Table

 1  2  3  4  5  6  7  8  9 10 11 12 13
 2  4  6  8 10 12 14 16 18 20 22 24 26
 3  6  9 12 15 18 21 24 27 30 33 36 39
 4  8 12 16 20 24 28 32 36 40 44 48 52
 5 10 15 20 25 30 35 40 45 50 55 60 65
 6 12 18 24 30 36 42 48 54 60 66 72 78
 7 14 21 28 35 42 49 56 63 70 77 84 91
 8 16 24 32 40 48 56 64 72 80 88 96 104
 9 18 27 36 45 54 63 72 81 90 99 108 117
10 20 30 40 50 60 70 80 90 100 110 120 130
11 22 33 44 55 66 77 88 99 110 121 132 143
12 24 36 48 60 72 84 96 108 120 132 144 156
13 26 39 52 65 78 91 104 117 130 143 156 169

Process finished with exit code 0
```

PROBLEM:

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

CODE:

```
balance = 0.00

3 usages
def show_balance():
    print("\n*****")
    print(f"Your balance is ${balance:.2f}")
    print("*****")

1 usage
def deposit():
    global balance
    print("*****")
    amount = float(input("Enter an amount to be deposited: "))
    balance += amount
    print("*****")
    show_balance()

1 usage
def withdraw():
    global balance
    print("*****")
    amount = float(input("Enter amount to be withdrawn: "))
    if amount <= balance:
        balance -= amount
        print("*****")
        show_balance()
    else:
        print("Insufficient funds.")
        print("*****")
```

```
def main_menu():
    while True:
        print("\n*****")
        print("ABCD 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:
            print("*****")
            show_balance()
        elif choice == 2:
            deposit()
        elif choice == 3:
            withdraw()
        elif choice == 4:
            print("*****")
            print("Thank you for using ABCD ATM!")
            break
        else:
            print("Invalid choice. Please try again.")
            print("*****")

if __name__ == "__main__":
    main_menu()
```

SAMPLE OUTPUT:

```
C:\Users\COMLAB\PycharmProjects\pythonProject2\venv\Scripts\python.exe
*****
ABCD ATM
*****
1. Show Balance
2. Deposit
3. Withdraw
4. Exit
*****
Enter your choice (1-4): 2
*****
Enter an amount to be deposited: 2000
*****

*****
Your balance is $2000.00
*****

*****
ABCD ATM
*****
1. Show Balance
2. Deposit
3. Withdraw
4. Exit
*****
Enter your choice (1-4): 3
*****
Enter amount to be withdrawn: 1000
*****
```

```
*****
Your balance is $1000.00
*****

*****
ABCD ATM
*****
1. Show Balance
2. Deposit
3. Withdraw
4. Exit
*****
Enter your choice (1-4): 1
*****

*****
Your balance is $1000.00
*****

*****
ABCD ATM
*****
1. Show Balance
2. Deposit
3. Withdraw
4. Exit
*****
Enter your choice (1-4): 4
*****
Thank you for using ABCD ATM!

Process finished with exit code 0
|
```