

Problem 1

Source Code:

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

print("Multiplication Table\n")

for r in range(1, rows + 1):
    for c in range(1, cols + 1):
        print(r * c, end="\t")
    print()
```

Sample Output:

```
How many rows: 4
How many cols: 4
Multiplication Table

1  2  3  4
2  4  6  8
3  6  9  12
4  8  12 16
```

```
How many rows: 9
How many cols: 9
Multiplication Table

1  2  3  4  5  6  7  8  9
2  4  6  8  10 12 14 16 18
3  6  9  12 15 18 21 24 27
4  8  12 16 20 24 28 32 36
5  10 15 20 25 30 35 40 45
6  12 18 24 30 36 42 48 54
7  14 21 28 35 42 49 56 63
8  16 24 32 40 48 56 64 72
9  18 27 36 45 54 63 72 81
```

Problem 2

Source Code:

```
balance = 0.0

def show_menu():
    print("*****")
    print("Shanshan ATM")
    print("*****")
    print("1. Show Balance")
    print("2. Deposit")
    print("3. Withdraw")
    print("4. Exit")
    print("*****")

def show_balance():
    print("*****")
    print(f"your balance is ₱{balance:.2f}")
    print("*****")

def deposit():
    global balance
    amount = float(input("enter an amount to be deposited: "))
    balance += amount
    print("*****")
    print(f"your balance is ₱{balance:.2f}")
    print("*****")

def withdraw():
    global balance
    amount = float(input("enter an amount to be withdrawn: "))
    if amount > balance:
        print("*****")
        print("insufficient funds!")
        print("*****")
    else:
        balance -= amount
        print("*****")
        print(f"your balance is ₱{balance:.2f}")
        print("*****")

while True:
    show_menu()
    choice = input("enter your choice (1-4): ")

    if choice == "1":
        show_balance()
    elif choice == "2":
        deposit()
    elif choice == "3":
        withdraw()
    elif choice == "4":
        print("thank you for using Shanshan ATM!")
        break
    else:
        print("invalid choice. please select 1-4.")
```

Sample Output:

```
Shanshan ATM
*****
1. Show Balance
2. Deposit
3. Withdraw
4. Exit
*****
enter your choice (1-4):
```

```
enter your choice (1-4): 1
*****
your balance is ₱0.00
```

```
enter your choice (1-4): 2
enter an amount to be deposited: 2400
*****
your balance is ₱2400.00
```

```
enter your choice (1-4): 3
enter an amount to be withdrawn: 2300
*****
your balance is ₱100.00
```

```
enter your choice (1-4): 4
thank you for using Shanshan ATM!
```