ESET 269 – Lab 3 Loops

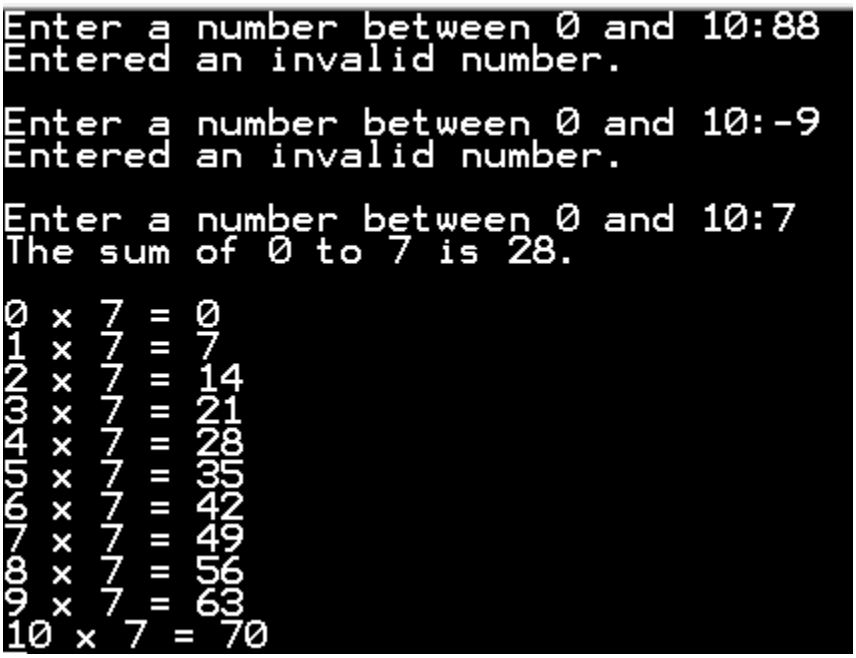
Code 1 (10 pts): Create a number program that does the following. It prompts a user to enter a positive whole number greater than 0 and no greater than 10. The program will then do the following

- Calculate the sum of all numbers from 0 to that number and print to the console window.
- Create a multiplication table of the number and display to the console window.

The program will stop running after the above is displayed.

If an invalid number is entered (negative or greater than 10), an error message will display and the program will prompt to enter another number.

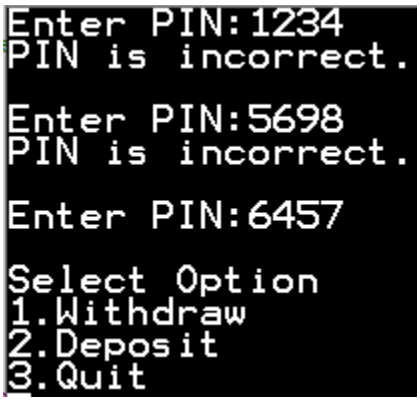
Example output is shown below.



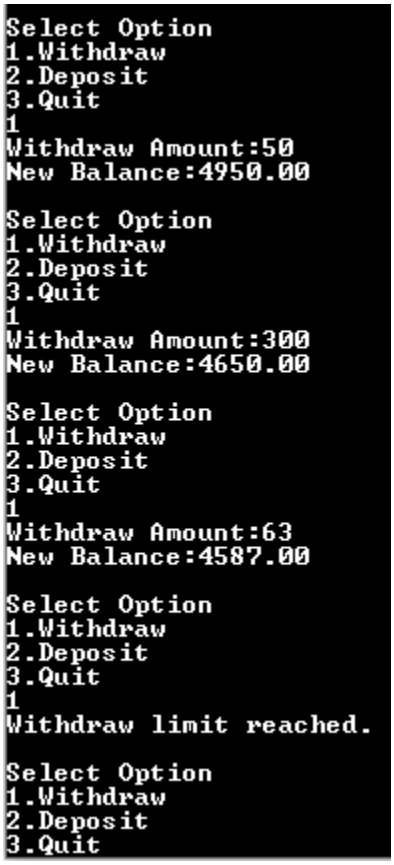
Code 2 (20 pts): Create an ATM machine program. The program works as follows:

- A user must first enter the correct PIN number. If the PIN number is wrong, the PIN prompt is redisplayed. If the PIN number is correct, then the ATM menu options are displayed. The correct PIN number is **6457**.
- There are three menu options: withdraw, deposit, and quit.
- A **switch statement must be used** to handle which menu option is selected. An error message will display if an option not listed is entered.
- A user can make multiple withdraws or deposits until they select the quit option.
- Only 3 withdraws can be made in a transaction. A 4th attempt at withdraw will display a message stating that withdraw is not possible, and the menu will be redisplayed.
- If there is not enough funds, the withdrawal cannot happen, and the menu is redisplayed.
- The number of deposits is unlimited. However, the most that can be deposited in one transaction is $3,000. Any deposit larger is ignored, and the menu is redisplayed.
- The initial amount of money is $5,000.
- The ATM program runs continually until the quit option is selected. The user is notified when the program quits.

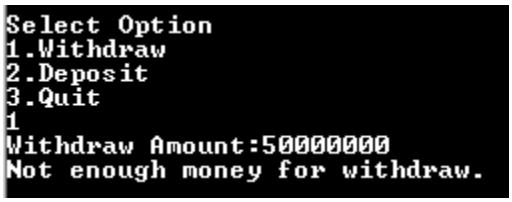
Example output is shown below.



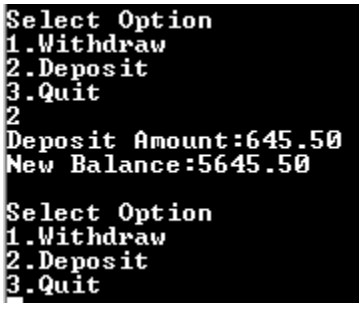
Example of PIN number



Example after making more than 3 withdraws



Example if not enough funds



Example for deposit

```
Select Option
1.Withdraw
2.Deposit
3.Quit
2
Deposit Amount:98
New Balance; 5098.00

Select Option
1.Withdraw
2.Deposit
3.Quit
2
Deposit Amount:654.75
New Balance; 5752.75

Select Option
1.Withdraw
2.Deposit
3.Quit
2
Deposit Amount:4500
Deposit amount too large. Ignoring transaction.

Balance:5752.75


Select Option
1.Withdraw
2.Deposit
3.Quit
```

Example with multiple deposits and single transaction exceeds $3,000

```
Select Option
1.Withdraw
2.Deposit
3.Quit
5
Not valid option


Select Option
1.Withdraw
2.Deposit
3.Quit
```

Example invalid option

```
Select Option
1.Withdraw
2.Deposit
3.Quit
3
Quitting program!
```

Example if quit selected