

Eustace Academy

Tutorial - Console ATM Machine (Arrays, Conditionals, and Loops)

Test 1 Section B

26 May 2025

Question 1 [3 hours]

Build a console-based ATM machine that allows users to:

- Create up to 3 bank accounts.
- Deposit and withdraw money from selected accounts.
- Check account balances.
- View all existing accounts.

What to use:

- Arrays (`string[]` to store account names, and `decimal[]` to store amounts)
- Whenever the user enters some amount, the amount should be stored as a decimal
- Conditional statements (`if`, `else`, `switch`)
- Loops (`do-while`, `for`)
- Every user input should be validated using `TryParse()` method

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Features Implemented:

Feature	Description
Create Account	Users can create up to 3 named accounts.
Deposit Cash	Deposit into a chosen account with validation.
Withdraw Cash	Withdraw from a selected account if funds are sufficient.
Check Balance	Display the balance of a selected account.
View All Accounts	Show all created accounts with balances.
Exit Program	End the session gracefully.

Important notes:

The **menu must be displayed** with the options to ***create account, deposit cash, withdraw cash, view accounts*** and an ***exit option***. The program should keep running until the user chooses an exit option.

When trying to withdraw or deposit an amount, **accounts created by the user should be displayed** and the user should be **prompted to choose the account** to do the *deposit or withdrawal* from the account. If the user chooses an option that's not provided for this, then an error message should be displayed, indicating that the user chose an **invalid option**.

When withdrawing cash, users cannot **withdraw an amount** that is **more than the available amount** in the selected account. **There should be an error** whenever the user tries to do this, they should get a message indicating that there is **insufficient amount** in the selected account.

It's also important to note that if the user tries to deposit, withdraw or view accounts without any created accounts. There should be a message indicating that the user has **no accounts**

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I provided a lot of example outputs below to demonstrate this clearly

Example outputs:

```
=====
Welcome to the Console ATM Machine.
=====
Select from the menu:
 1.Create an account
 2.Deposit cash
 3.Withdraw cash
 4.Check balance
 5.View accounts
 6.Exit
-----
Enter Choice: 2
-----
%% Error: You have no accounts %%

Select from the menu:
 1.Create an account
 2.Deposit cash
 3.Withdraw cash
 4.Check balance
 5.View accounts
 6.Exit
-----
Enter Choice: _
```

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```
=====
Welcome to the Console ATM Machine.
=====
```

```
Select from the menu:
```

- 1.Create an account
- 2.Deposit cash
- 3.Withdraw cash
- 4.Check balance
- 5.View accounts
- 6.Exit

```
-----
Enter Choice: Alright
```

```
%% INVALID choice %%
-----
```

```
Select from the menu:
```

- 1.Create an account
- 2.Deposit cash
- 3.Withdraw cash
- 4.Check balance
- 5.View accounts
- 6.Exit

```
-----
Enter Choice: █
```

```
Select from the menu:
```

- 1.Create an account
- 2.Deposit cash
- 3.Withdraw cash
- 4.Check balance
- 5.View accounts
- 6.Exit

```
-----
Enter Choice: 2
```

```
Choose Account to deposit:
```

1. myACC Balance=R0

```
-----
Enter account choice: 1
```

```
Enter amount: 700
```

```
-----
Your have successfully deposited R700 into myACC.Available amount is = R700
```

```
Select from the menu:
```

- 1.Create an account
- 2.Deposit cash
- 3.Withdraw cash
- 4.Check balance
- 5.View accounts
- 6.Exit

```
-----
Enter Choice: █
```

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```

5.View accounts
6.Exit
-----
Enter Choice: 1
-----
Enter account name: Savings
-----
You have successfully created an account called Savings

Select from the menu:
1.Create an account
2.Deposit cash
3.Withdraw cash
4.Check balance
5.View accounts
6.Exit
-----
Enter Choice: 2

Choose Account to deposit:
1. Savings  Balance=R0
-----
Enter account choice:

```

```

1.Create an account
2.Deposit cash
3.Withdraw cash
4.Check balance
5.View accounts
6.Exit
-----
Enter Choice: 2

Choose Account to deposit:
1. Savings  Balance=R500
-----
Enter account choice: -1
-----
%% Error: Invalid account choice.. %%

Select from the menu:
1.Create an account
2.Deposit cash
3.Withdraw cash
4.Check balance
5.View accounts
6.Exit
-----
Enter Choice: 5

==== ACCOUNTS ====
1. Savings      Balance=R500

```

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```
Enter account name: Kab33
-----
You have successfully created an account called Kab33
```

```
Select from the menu:
1.Create an account
2.Deposit cash
3.Withdraw cash
4.Check balance
5.View accounts
6.Exit
-----
```

```
Enter Choice: 5
```

```
==== ACCOUNTS ====
1. Savings 1      Balance=R100
2. Savings 2      Balance=R0
3. Kab33          Balance=R0
```

```
Select from the menu:
1.Create an account
2.Deposit cash
3.Withdraw cash
4.Check balance
5.View accounts
6.Exit
-----
```

```
Enter Choice: 1
```

```
Select from the menu:
1.Create an account
2.Deposit cash
3.Withdraw cash
4.Check balance
5.View accounts
6.Exit
-----
```

```
Enter Choice: 3
```

```
Choose Account to deposit:
1. myAccount      Balance=R0
-----
```

```
Enter account choice: 1
-----
```

```
Enter amount: 2
-----
```

```
Error: Insufficient amount in the myAccount account..
```

```
Select from the menu:
1.Create an account
2.Deposit cash
3.Withdraw cash
4.Check balance
5.View accounts
6.Exit
-----
```

```
Enter Choice:
```

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C:\Users\User\Desktop\Eustace Academy Tutorial 2\tutorial 2\tutorial 2\bin\Debug\tutorial 2.exe

Select from the menu:

- 1.Create an account
- 2.Deposit cash
- 3.Withdraw cash
- 4.Check balance
- 5.View accounts
- 6.Exit

Enter Choice: 3

Choose Account to deposit:

1. myAccount Balance=R600

Enter account choice: 1

Enter amount: 200

You have successfully withdrawn R200 from myAccount account.Available amount is = R400

Select from the menu:

- 1.Create an account
- 2.Deposit cash
- 3.Withdraw cash
- 4.Check balance
- 5.View accounts
- 6.Exit

Enter Choice:

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