

## ATM CASE STUDY TESTFILE

### Input Format:

1. At first user need to enter 5-digit account number, if the user enters wrong/invalid account number then the system asks the user to re-enter the correct account number
2. Next the user need to enter the pin number, if the pin number is correct the user can use the ATM system otherwise the user has 3 valid attempts
3. Even after 3 attempts if the credentials fail to match the user is given two options either to reset the pin or exit.
4. Here user have two options to choose 1) reset 2) exit, so the input is 1 or 2. (int data type)
5. If the user chooses option 1, to reset the password user must input the security code.
6. Input – security code (3-digit integer --- int data type)
7. If the user chooses option 2, no input is needed, users account logged out from ATM.
8. Input formats

The user need to input a account number and pin number to login into the ATM machine

- Account number ---- 5-digit integer (int data type)
- Pin number --- 5-digit integer (int data type)

After the successful login user has 5 options to choose – here user needs to select these options by giving input to the system ( $1 \leq \text{input} \leq 5$  --- int data type)

1. View balance
2. Deposit money
3. Withdraw money
4. Reset password
5. Exit

- If the user chooses view balance option, no need to give input any value, it results the output directly (balance in users bank account)
- If the user chooses deposit money option, user needs to input the money (int data type) to be deposited
- If the user chooses withdraw money option, user needs to input the money (int data type) to be withdraw from ATM
- If the user chooses reset password option, user needs to input the new 5-digit pin number (int data type) to reset the pin
- If the user chooses exit option, no input is needed, users account logged out from ATM.

### **Output Formats:**

- When the user enters (input) wrong account number, system shows the output as “enter correct account number” (String data type)
- When the user pin number input was wrong then the system shows output as “Invalid password”.
- The invalid password is valid upto three times, after that ATM machine shows 2 options as ouput “1) reset password 2) exit” (String data type).
- After resetting pin number, the new pin number is given as output (int data type)
- Output : shows the available options as strings(after successful login)
- View balance option gives us the output as balance of the user (int data type)
- Deposit money option displays the final amount in users bank account after taking input from the user (int data type)
- Withdraw money option displays the final amount in users bank account after taking input from the user (int data type)
- Reset password option displays the new password (int data type)

The image shows a screenshot of an IDE window titled "ATM.java". The main editor area displays the source code of an ATM program. The code includes prompts for account number, pin, and a menu of options (view balance, withdraw, deposit, change password, exit). It also contains logic for calculating the balance and handling withdrawals. The bottom of the window features a terminal panel showing the program's execution. The terminal output shows the program's prompts, user input (12345, 10025, 1, 1000), and the resulting balance (15000.0) and withdrawal amount (1000). The IDE interface includes a sidebar with icons for file explorer, search, and other tools, and a status bar at the bottom showing the current file's state and encoding.

Output screen showing result of operations performed with valid credentials

```
ATM.java x
Run: ATM x Main x
5)exit
3
enter the amount to deposit
500
your balance amount 15500.0
1) view balance
2) withdraw
3) deposit
4)change password
5)exit
4
enter security pin to change pass word
1245
enter your new pin
67890
your new pin
67890

1) view balance
2) withdraw
3) deposit
4)change password
5)exit
5
Thank You!

Enter account number
```

Version Control Run TODO Terminal Services Build Problems

All files are up-to-date (3 minutes ago) 59:1 CRLF UTF-8 4 spaces

Output screen showing result of operations performed with valid credentials

```
ATM.java x
Run: ATM x Main x
↑ enter your new pin
↓ 67890
your new pin
67890
1) view balance
2) withdraw
3) deposit
4)change password
5)exit
5
Thank You!

Enter account number
12345
Enter pin
12356
Invalid password
Enter account number
12567
enter correct account number
12345
Enter pin
12347
Invalid password
Enter account number
12345
Enter pin
14678
Choose the option
```

Version Control Run TODO Terminal Services Build Problems

All files are up-to-date (6 minutes ago) 97:1 CRLF UTF-8 4 spaces

Multiple attempts of invalid credentials

```
ATM.java x
Run: ATM x Main x
Invalid password
Enter account number
12345
Enter pin
14678
Choose the option
1)would you like to reset your password
2)exit
1
enter security pin to change pass word
1245
enter your new pin
10078
your new pin
10078
Enter account number
12345
Enter pin
10078

1) view balance
2) withdraw
3) deposit
4)exit
4
Thank You!

Enter account number
|
```

Version Control Run TODO Terminal Services Build

All files are up-to-date (7 minutes ago)

97:1 CRLF UTF-8 4 spaces

Resetting pin number

```
ATM.java x
Run: ATM x Main x
"C:\Program Files\Java\jdk-18.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022.2.2\lib\idea_rt.jar=51378:C:\Program Files\JetBrains\I
Welcome
Enter account number
12345
Enter pin
10025
1) view balance
2) withdraw
3) deposit
4)change password
5)exit
1
16000.0

1) view balance
2) withdraw
3) deposit
4)change password
5)exit
2
enter the amount to withdraw
17000
insufficient balance

1) view balance
2) withdraw
3) deposit
4)change password
5)exit
```

Error message when there is insufficient amount in bank account

```
ATM.java x
Run: ATM x Main x
1
16000.0
1) view balance
2) withdraw
3) deposit
4)change password
5)exit
2
enter the amount to withdraw
17000
insufficient balance

1) view balance
2) withdraw
3) deposit
4)change password
5)exit
2
enter the amount to withdraw
10000000
ATM is out of money
```

Error message when there is insufficient amount in ATM machine.