

**Registration Number: -12204834**

**Course Code-CAP680**

**ROLL N0: -55**

**Section: 2212**

**Group-2**

**Sandbox Link: -**

**<https://codehs.com/sandbox/id/reg-n0-12204834-qCaIRa>**

# Code

```
import java.util.Scanner;
import java.util.regex.Matcher;
import java.util.regex.Pattern;
class MyProgram {
    private String username;
    private String password;
    private int balance;
    public MyProgram(String username, String password, int
balance) {
        this.username = username;
        this.password = password;
        this.balance = balance;
    }
    public void deposit(int amount) {
        balance += amount;
    }
    public boolean withdraw(int amount) {
```

```
if (balance - amount >= 2000) {  
    balance -= amount + 100;  
    return true;  
} else {  
    return false;  
}  
  
public int getBalance() {  
    return balance;  
}  
  
public boolean authenticate(String username, String  
password) {  
    return this.username.equals(username) &&  
this.password.equals(password);  
}  
  
public static void main(String[] args) {  
    Scanner sc = new Scanner(System.in);  
    System.out.print("Enter your username: ");  
    String username = sc.nextLine();
```

```
System.out.print("Enter your password: ");
String password = sc.nextLine();
while (!isValidPassword(password)) {
    System.out.println("Invalid password. Please enter a
password that: ");
    System.out.println("- contains at least 1 lowercase
letter");
    System.out.println("- contains at least 1 digit");
    System.out.println("- contains at least 1 uppercase
letter");
    System.out.println("- contains at least 1 of the following
characters: $#@");
    System.out.println("- has a minimum length of 6
characters and a maximum length of 12 characters");
    System.out.print("Enter your password: ");
    password = sc.nextLine();
}
System.out.print("Enter your initial account balance: ");
int balance = sc.nextInt();
```

```
MyProgram account = new MyProgram(username,
password, balance);
sc.nextLine();
boolean running = true;
while (running) {
System.out.println("1. See account balance");
System.out.println("2. Deposit cash");
System.out.println("3. Withdraw cash");
System.out.println("4. Exit");
System.out.print("Enter your choice: ");
int choice = sc.nextInt();
sc.nextLine();
switch (choice) {
case 1:
System.out.print("Enter your username: ");
String u = sc.nextLine();
System.out.print("Enter your password: ");
String p = sc.nextLine();
if (account.authenticate(u, p)) {
```

```
System.out.println("Your account balance is: " +
account.getBalance());
} else {
System.out.println("Invalid username or password.");
}
break;
case 2:
System.out.print("Enter your username: ");
u = sc.nextLine();
System.out.print("Enter your password: ");
p = sc.nextLine();
if (account.authenticate(u, p)) {
System.out.print("Enter the amount you want to
deposit: ");
int amount = sc.nextInt();
sc.nextLine();
account.deposit(amount);

System.out.println("$" + amount + " has been deposited
to your account. Your current balance is:"
```

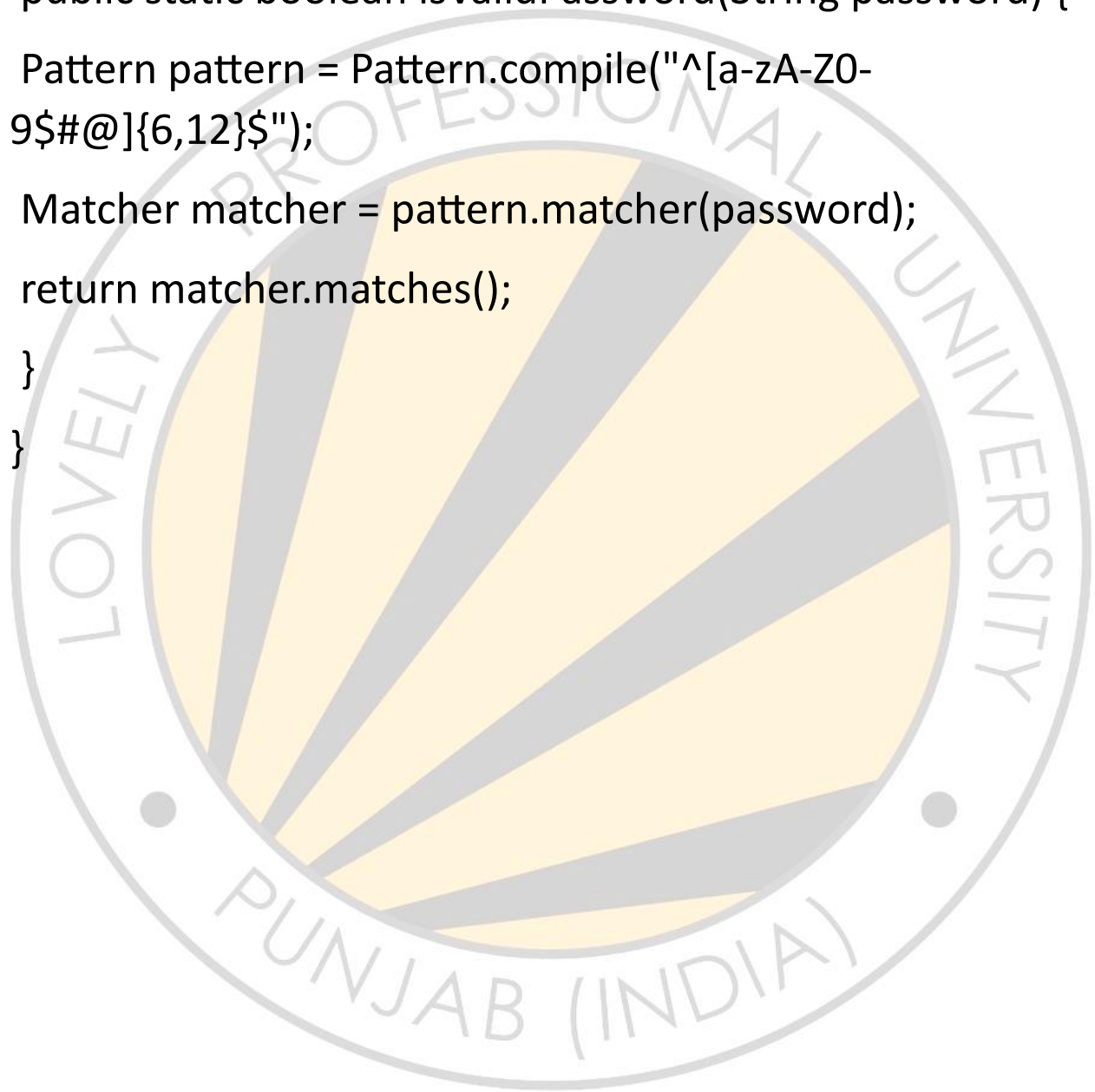


```
+ account.getBalance());
} else {
System.out.println("Invalid username or password.");
}
break;
case 3:
System.out.print("Enter your username: ");
u = sc.nextLine();
System.out.print("Enter your password: ");
p = sc.nextLine();
if (account.authenticate(u, p)) {
System.out.print("Enter the amount you want to
withdraw: ");
int amount = sc.nextInt();
sc.nextLine();
if (account.withdraw(amount)) {
System.out.println("$" + amount + " has been withdrawn
from your account. Your current balance is:"
+account.getBalance());
```

```
}  
else {  
    System.out.println("You don't have enough funds. Your  
account balance must be at least Rs.2000 after the  
withdrawal.");  
}  
} else {  
    System.out.println("Invalid username or password.");  
}  
break;  
case 4:  
    System.out.println("Exiting the program.");  
    running = false;  
    break;  
default:  
    System.out.println("Invalid choice. Please enter a  
number between 1 and 4.");  
    break;  
}
```



```
}  
}  
  
public static boolean isValidPassword(String password) {  
    Pattern pattern = Pattern.compile("^[a-zA-Z0-9$#@]{6,12}$");  
    Matcher matcher = pattern.matcher(password);  
    return matcher.matches();  
}  
}
```



**Screenshot of sandbox with code:**

REG NO-12204834 | CodeHS

←

https://codehs.com/sandbox/id/reg-no-12204834-qCaRa

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Ankush Kumar

REG NO-12204834

ShareSave

MyProgram.java

```
1- import java.util.Scanner;
2- import java.util.regex.Matcher;
3- import java.util.regex.Pattern;
4- class MyProgram {
5-     private String username;
6-     private String password;
7-     private int balance;
8-     public MyProgram(String username, String password, int balance) {
9-         this.username = username;
10-        this.password = password;
11-        this.balance = balance;
12-    }
13-    public void deposit(int amount) {
14-        balance += amount;
15-    }
16-    public boolean withdraw(int amount) {
17-        if (balance - amount >= 2000) {
18-            balance -= amount + 100;
19-            return true;
20-        } else {
21-            return false;
22-        }
23-    }
24-    public int getBalance() {
25-        return balance;
26-    }
27-    public boolean authenticate(String username, String password) {
28-        return this.username.equals(username) && this.password.equals(password);
29-    }
30-    public static void main(String[] args) {
31-        Scanner sc = new Scanner(System.in);
32-        System.out.print("Enter your username: ");
33-        String username = sc.nextLine();
34-        System.out.print("Enter your password: ");
35-        String password = sc.nextLine();
36-        while (!isValidPassword(password)) {
37-            System.out.println("Invalid password. Please enter a password that: ");
38-        }
39-    }
40-}
```

Output

Docs

More

RunStop

Enter your username: Ankush  
Enter your password: Ankush@12  
Enter your initial account balance: 10000  
1. See account balance  
2. Deposit cash  
3. Withdraw cash  
4. Exit  
Enter your choice: 1  
Enter your username: Ankush  
Enter your password: Ankush@12  
Your account balance is: 10000  
1. See account balance  
2. Deposit cash  
3. Withdraw cash  
4. Exit  
Enter your choice: 3  
Enter your username: Ankush  
Enter your password: Ankush@12  
Enter the amount you want to withdraw: 100000  
You don't have enough funds. Your account balance must be at least \$2000 after the withdrawal.  
1. See account balance  
2. Deposit cash  
3. Withdraw cash  
4. Exit  
Enter your choice: 2  
Enter your username: Ankush  
Enter your password: Ankush@12  
Enter the amount you want to deposit: 5000  
\$5000 has been deposited to your account. Your current balance is:15000  
1. See account balance  
2. Deposit cash  
3. Withdraw cash  
4. Exit  
Enter your choice: 0