

**NAME – MAYANK BAGAULI**

**ROLL\_NO. -200186**

1. Write a Java Program which, prints the elements of a string in such a way that the first and last element of the string are printed in Upper case and the intermediate elements are printed in reverse order.(do not use inbuilt function for reverse)

```
import java.lang.*;
```

```
import java.io.*;
```

```
import java.util.*;
```

```
class ReverseString1 {
```

```
    public static void main(String[] args)
```

```
{
```

```
    String input = "TIT for TAT";
```

```
        byte[] strAsByteArray =  
input.getBytes();
```

```
        byte[] result = new  
byte[strAsByteArray.length];
```

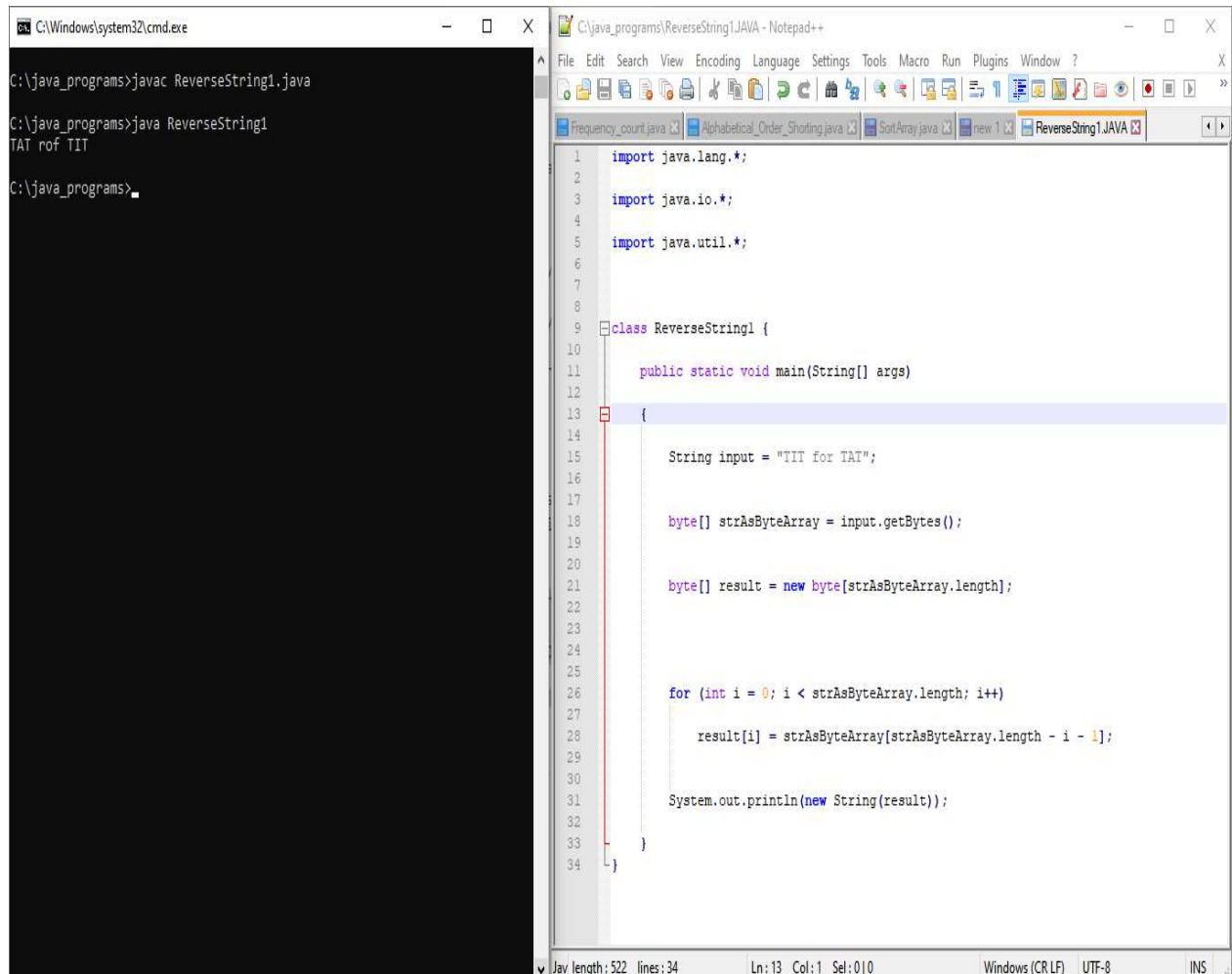
```
        for (int i = 0; i <
strAsByteArray.length; i++)
```

```
        result[i] =
strAsByteArray[strAsByteArray.length - i -
1];
```

```
        System.out.println(new
String(result));
```

```
    }
}
```

# OUTPUT:



The image shows a screenshot of a Windows environment with two windows. The left window is a Command Prompt titled 'C:\Windows\system32\cmd.exe' showing the execution of a Java program. The right window is a Notepad++ editor titled 'C:\java\_programs\ReverseString1.JAVA - Notepad++' showing the source code of the program.

**Command Prompt Output:**

```
C:\java_programs>javac ReverseString1.java
C:\java_programs>java ReverseString1
TAT rof TIT
C:\java_programs>_
```

**ReverseString1.JAVA Source Code:**

```
1  import java.lang.*;
2
3  import java.io.*;
4
5  import java.util.*;
6
7
8
9  class ReverseString1 {
10
11      public static void main(String[] args)
12      {
13
14          String input = "TIT for TAT";
15
16          byte[] strAsByteArray = input.getBytes();
17
18          byte[] result = new byte[strAsByteArray.length];
19
20
21          for (int i = 0; i < strAsByteArray.length; i++)
22          {
23              result[i] = strAsByteArray[strAsByteArray.length - i - 1];
24          }
25
26          System.out.println(new String(result));
27      }
28  }
```

The status bar at the bottom of the Notepad++ window indicates: 'Jav length: 522 lines: 34 Ln: 13 Col: 1 Sel: 0|0 Windows (CR LF) UTF-8 INS'.

2. Write a Java Program that has a Class Which Creates Account, perform Deposit Money and Tries to Withdraw more Money Which Generates a LessBalanceException. Create BankAccount with 500 Rs Minimum Balance, Deposit Amount, Withdraw Amount and Also Throws LessBalanceException. Class LessBalanceException returns the Statement that Says Withdraw Amount(\_Rs) is Not Valid.

```
import java.io.*;
import java.lang.*;
class LessBalanceException extends
Exception
{
    LessBalanceException(double amt)
    {
        System.out.println("Withdrawing "+amt+"
is invlaid");
    }
}
class Account
{
    static int count=0;
    int accno;
    double bal;
    String name;
    Account(double bal,String n,int accno)
```

```

{
    System.out.println("\nNew Account
opened....!!");
    this.bal=bal;
    count++;
    System.out.println("Account Holder Name
: " + n);
    name=n;
    System.out.println("Your Account Number
is : "+accno);
    this.accno=accno;
    System.out.println("Total number of
accounts : "+count);

}
void deposit(double amt)
{
    System.out.println("Availabe Balance :
"+bal);
    bal=bal+amt;
    System.out.println("Rs. : "+amt+" /-
Created");
    System.out.println("Balance : "+bal);
}
void withdraw(double amt) throws
LessBalanceException
{
    System.out.println("\nAvailabe Balance
: "+bal);
    bal-=amt;

```

```

        if(bal<500)
        {
            bal+=amt;
            throw new LessBalanceException(amt);
        }
        System.out.println("Rs. : "+amt+ " /-
Debited");
        System.out.println("Balacne : "+bal);
    }
    void balance()
    {
        System.out.println("\n*****Customer
information*****");

        System.out.println("=====
=====");
        System.out.println("Customer Name :
"+name);
        System.out.println("Account Number :
"+accno);
        System.out.println("Balance : "+bal);
    }
}
class AccountDemo
{
    static int i=0;
    public static void main(String argv[])
throws IOException
    {
        Account ob[]=new Account[10];
    }
}

```

```

        BufferedReader br=new
BufferedReader(new
InputStreamReader(System.in));
        double amt;
        String name;
        int ch,accno,k;
        boolean t=false;
        while(true)
        {
            System.out.println("\n*** Bank
Transaction ***");
            System.out.println("1.Open new
Account\n2.Deposit");

System.out.println("3.Withdraw\n4.Balance
\n5.Exit");
            System.out.print("Enter your choice :
");
            ch=Integer.parseInt(br.readLine());
            switch(ch)
            {
                case 1:
                    System.out.println("Opening New
Account : ");
                    System.out.print("Enter your name :
");
                    name=br.readLine();
                    System.out.print("\nEnter Account
Number : ");
                    accno=Integer.parseInt(br.readLine());

```

```
        System.out.print("\nEnter initial  
amount(to be >=500) : ");  
        amt=Double.parseDouble(br.readLine());  
        if(amt<500)  
            System.out.println("You cannot create  
an account with less than Rs.500/-");  
        else  
        {  
            ob[i]=new Account(amt,name,accno);  
            i++;  
        }  
        break;
```

```
        case 2:  
            System.out.print("\nEnter Account  
number : ");  
            accno=Integer.parseInt(br.readLine());  
            for(k=0;k<i;k++)  
                if(accno==ob[k].accno)  
                {  
                    t=true;  
                    break;  
                }
```

```
            if(t)  
            {  
                System.out.print("\nEnter the Amount  
for Deposit : ");
```

```
            amt=Double.parseDouble(br.readLine());
```



```
        ob[k].deposit(amt);
    }
    else
        System.out.println("Invalid Account
Number...!!!");
    t=false;
    break;

    case 3:
        System.out.print("\nEnter Account
number : ");
        accno=Integer.parseInt(br.readLine());
        for(k=0;k<i;k++)
            if(accno==ob[k].accno)
            {
                t=true;
                break;
            }

        if(t)
        {
            System.out.print("\nEnter the Amount
for Withdraw : ");

amt=Double.parseDouble(br.readLine());
        try
        {
            ob[k].withdraw(amt);
        }
        catch(LessBalanceException e)
```

```

        {}
    }
    else
        System.out.println("Invalid Account
Number...!!!");
        t=false;
        break;

    case 4:
        System.out.print("\nEnter Account
number : ");
        accno=Integer.parseInt(br.readLine());
        for(k=0;k<i;k++)
            if(accno==ob[k].accno)
            {
                t=true;
                break;
            }

        if(t)
        {
            //System.out.println(accno +" asdfsdf
" +ob[k].accno);
            ob[k].balance();
        }
        else
            System.out.println("Invalid Account
Number...!!!");
            t=false;
            break;

```

```
case 5:  
    System.exit(1);
```

```
default: System.out.println("Invalid  
Choice !!!");
```

```
}
```

```
}
```

```
}
```

```
}
```

# OUTPUT:

The screenshot shows a Windows command prompt window on the left and a Notepad++ editor window on the right. The command prompt displays the output of running a Java program named AccountDemo.java. The program prompts the user to enter a choice from a menu: 1. Open new Account, 2. Deposit, 3. Withdraw, 4. Balance, 5. Exit. The user enters '1' to open a new account. The program prompts for a name (MAYANK BAGGAULI), an account number (20561038), and an initial amount (1000). It then displays the account details: 'New Account opened.....!', 'Account Holder Name : MAYANK BAGGAULI', 'Your Account Number is : 20561038', and 'Total number of accounts : 1'. The user then enters '3' to withdraw. The program prompts for an amount (800) and displays the available balance (1000.0). It then shows an error message: 'Withdrawing 800.0 is invlaid'. The user then enters '2' to deposit. The program prompts for an amount (800) and displays the available balance (1000.0). The user then enters '3' to withdraw. The program prompts for an amount (800) and displays the available balance (1000.0). The user then enters '5' to exit. The program displays '\*\*\* Bank Transaction \*\*\*' and then '1.Open new Account'. The Notepad++ editor shows the source code of AccountDemo.java. The code includes a menu, a switch statement for handling user choices, and a main method that initializes an array of Account objects and a BufferedReader for input. The code is written in Java and uses standard syntax for classes, methods, and variables.

```
C:\Windows\system32\cmd.exe  
C:\java_programs>javac AccountDemo.java  
C:\java_programs>java AccountDemo  
  
*** Bank Transaction ***  
1.Open new Account  
2.Deposit  
3.Withdraw  
4.Balance  
5.Exit  
Enter your choice : 1  
Opening New Account :  
Enter your name : MAYANK BAGGAULI  
  
Enter Account Number : 20561038  
  
Enter initial amount(to be >=500) : 1000  
  
New Account opened.....!  
Account Holder Name : MAYANK BAGGAULI  
Your Account Number is : 20561038  
Total number of accounts : 1  
  
*** Bank Transaction ***  
1.Open new Account  
2.Deposit  
3.Withdraw  
4.Balance  
5.Exit  
Enter your choice : 3  
  
Enter Account number : 20561038  
  
Enter the Amount for Withdraw : 800  
  
Availabe Balance : 1000.0  
Withdrawing 800.0 is invlaid  
  
*** Bank Transaction ***  
1.Open new Account  
2.Deposit  
3.Withdraw
```

```
C:\java_programs\AccountDemo.java - Notepad++  
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?  
Alphabetical_Order_Shorting.java SortArray.java new 1 ReverseString1.JAVA AccountDemo.java  
37 System.out.println("\nAvailabe Balance : "+bal);  
38 bal-=amt;  
39 if(bal<500)  
40 {  
41     bal+=amt;  
42     throw new LessBalanceException(amt);  
43 }  
44 System.out.println("Rs. : "+amt+ "/-Debitd");  
45 System.out.println("Balacne : "+bal);  
46 }  
47 void balance()  
48 {  
49     System.out.println("\n*****Customer information*****");  
50     System.out.println("=====");  
51     System.out.println("Customer Name : "+name);  
52     System.out.println("Account Number : "+accno);  
53     System.out.println("Balance : "+bal);  
54 }  
55 }  
56 class AccountDemo  
57 {  
58     static int i=0;  
59     public static void main(String argv[]) throws IOException  
60     {  
61         Account ob[]=new Account[10];  
62         BufferedReader br=new BufferedReader(new InputStreamReader(System.in));  
63         double amt;  
64         String name;  
65         int ch,accno,k;  
66         boolean t=false;  
67         while(true)  
68         {  
69             System.out.println("\n*** Bank Transaction ***");  
70             System.out.println("1.Open new Account\n2.Deposit");  
71             System.out.println("3.Withdraw\n4.Balance\n5.Exit");  
72             System.out.print("Enter your choice : ");  
73             ch=Integer.parseInt(br.readLine());
```

```
C:\Windows\system32\cmd.exe
Account Holder Name : MAYANK BAGAUJI
Your Account Number is : 20561038
Total number of accounts : 1

*** Bank Transaction ***
1.Open new Account
2.Deposit
3.Withdraw
4.Balance
5.Exit
Enter your choice : 3

Enter Account number : 20561038

Enter the Amount for Withdraw : 800

Availabe Balance : 1000.0
Withdrawing 800.0 is invlaid

*** Bank Transaction ***
1.Open new Account
2.Deposit
3.Withdraw
4.Balance
5.Exit
Enter your choice : 3

Enter Account number : 20561038

Enter the Amount for Withdraw : 600

Availabe Balance : 1000.0
Withdrawing 600.0 is invlaid

*** Bank Transaction ***
1.Open new Account
2.Deposit
3.Withdraw
4.Balance
5.Exit
Enter your choice : 5

C:\java_programs>

C:\java_programs\AccountDemo.java - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
Alphabetical_Order_Shorting.java SortArray.java new 1 ReverseString1.JAVA AccountDemo.java
37 System.out.println("\nAvailabe Balance : "+bal);
38 bal=amt;
39 if(bal<500)
40 {
41 bal+=amt;
42 throw new LessBalanceException(amt);
43 }
44 System.out.println("Rs. : "+amt+ " /-Debited");
45 System.out.println("Balacne : "+bal);
46 }
47 void balance()
48 {
49 System.out.println("\n*****Customer information*****");
50 System.out.println("=====");
51 System.out.println("Customer Name : "+name);
52 System.out.println("Account Number : "+accno);
53 System.out.println("Balance : "+bal);
54 }
55 }
56 class AccountDemo
57 {
58 static int i=0;
59 public static void main(String argv[]) throws IOException
60 {
61 Account ch[]=new Account[10];
62 BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
63 double amt;
64 String name;
65 int ch,accno,k;
66 boolean t=false;
67 while(true)
68 {
69 System.out.println("\n*** Bank Transaction ***");
70 System.out.println("1.Open New Account\n2.Deposit");
71 System.out.println("3.Withdraw\n4.Balance\n5.Exit");
72 System.out.print("Enter your choice : ");
73 ch=Integer.parseInt(br.readLine());
```