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Aim: Implement a generic program using any collection with specific property like , even no. , odd no. , prime no. & palindromes..

package Exp7;

public class MyNumber

{

public <T> Boolean isEven(T a)

{

if(Integer.parseInt(a.toString()) % 2 == 0)

return true;

else

return false;

}

public <T> float addition(T a, T b)

{

float sum=0;

sum = Float.parseFloat(a.toString()) + Float.parseFloat(a.toString()) ;

return sum;

}

public < T > boolean isPallindrome(T s)

{

String s1 = s.toString();

StringBuffer sb = new StringBuffer(s1);

String ss = new String(sb.reverse());

if(s1.equals(ss))

return true;

else

return false;

}

}

package Exp7;

import java.util.Scanner;

public class TestNumber

{

private static float Sum;

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int num, x;

float num1, num2;

String s;

MyNumber n1 = new MyNumber();

do

{

System.out.println("MENU \n 1:addition of two float numbers"

+"\n2:Even Odd number \n3:Plaindrome String"

+"\n4:Exit \n Choice ::");

x = sc.nextInt();

switch(x)

{

case 1:

System.out.print("Enter first float number: ");

num1 = sc.nextFloat();

System.out.print("Enter second float number: ");

num2 = sc.nextFloat();

break;

case 2:

System.out.print("Enter intger number: ");

num = sc.nextInt();

if(n1.isEven(num))

{

System.out.println("Number is even");

}

else

{

System.out.println("Number is Odd");

}

break;

case 3:

System.out.print("Enter String: ");

s = sc.next();

if(n1.isPallindrome(s))

{

System.out.println("String is Palindrome");

}

else

{

System.out.println("String is not Palindrome");

}

break;

case 4:

System.out.println(" Program closed ");

System.exit(0);

default:

System.out.println(" Invalid choice... ");

}

}while(x != 4);

sc.close();

}

}

OUTPUT:

MENU

1:addition of two float numbers

2:Even Odd number

3:Plaindrome String

4:Exit

Choice ::

1

Enter first float number: 22

Enter second float number: 23

MENU

1:addition of two float numbers

2:Even Odd number

3:Plaindrome String

4:Exit

Choice ::

2

Enter intger number: 22

Number is even

MENU

1:addition of two float numbers

2:Even Odd number

3:Plaindrome String

4:Exit

Choice ::

2

Enter intger number: 23

Number is Odd

MENU

1:addition of two float numbers

2:Even Odd number

3:Plaindrome String

4:Exit

Choice ::

3

Enter String: 22

String is Palindrome

MENU

1:addition of two float numbers

2:Even Odd number

3:Plaindrome String

4:Exit

Choice ::

3

Enter String: 23

String is not Palindrome

MENU

1:addition of two float numbers

2:Even Odd number

3:Plaindrome String

4:Exit

Choice ::

4

Program closed