**Problem 03:**

**Reverse a string using stack.**

import java.util.\*;

class Stack

{

int size;

int top;

char[] a;

boolean isEmpty()

{

return (top < 0);

}

Stack(int n)

{

top = -1;

size = n;

a = new char[size];

}

boolean push(char x)

{

if (top >= size)

{

System.out.println("Stack Overflow");

return false;

}

else

{

a[++top] = x;

return true;

}

}

char pop()

{

if (top < 0)

{

System.out.println("Stack Underflow");

return 0;

}

else

{

char x = a[top--];

return x;

}

}

}

class Main

{

public static void reverse(StringBuffer str)

{

int n = str.length();

Stack obj = new Stack(n);

int i;

for (i = 0; i < n; i++)

obj.push(str.charAt(i));

for (i = 0; i < n; i++)

{

char ch = obj.pop();

str.setCharAt(i,ch);

}

}

public static void main(String args[])

{

StringBuffer s= new StringBuffer("HELLOWORLD!");

reverse(s);

System.out.println("Reversed string is " + s);

}

}