**Assisted Practice: 4.8 Stack**

This section will guide you to:

* Write a program in Java to insert and remove elements in a stack
* Use Eclipse (the popular text editor for Java programs)
* Push code to Git

This lab has three subsections, namely:

* + 1. Creating a new project in Eclipse
    2. Writing the program in Java
    3. Pushing the created files to Git

**Step 4.8.1:** Creating a new project in Eclipse

* Open Eclipse
* Go to File -> New -> Project -> Java Project -> Next
* Type in any project name and click on Finish
* Select your project and go to File -> New -> Class
* Enter **Stack** in class name, check the checkbox **public static void main(String args)**, and click on Finish

**Step 4.8.2:** Writing the program in Java

You need to write the program to insert and remove elements in a stack.

public class Stack

{

static final int MAX = 1000;

int top;

int a[] = new int[MAX];

boolean isEmpty()

{

return (top < 0);

}

Stack()

{

top = -1;

}

boolean push(int x)

{

if (top >= (MAX-1))

{

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

return false;

}

else

{

a[++top] = x;

System.out.println(x + " pushed into stack");

return true;

}

}

int pop()

{

if (top < 0)

{

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

return 0;

}

else

{

int x = a[top--];

return x;

}

}

public static void main(String args[])

{

Stack s = new Stack();

s.push(10);

s.push(20);

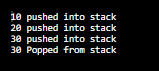
s.push(30);

System.out.println(s.pop() + " Popped from stack");

}

}

**Output:**



**Step 4.8.3:** Pushing the created files to Git

* Open your command prompt and navigate to the folder where you have created your files.

**cd <folder path>**

* Initialize your repository using the following command:

**git init**

* Add all the files to your git repository using the following command:

**git add .**

* Commit the changes using the following command:

**git commit . -m “Changes have been committed.”**

* Push the files to the folder you initially created using the following command:

**git push -u origin master**