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Programming Assignment 3: Stack Intro

Programming Assignment 4a: Stack Introduction

```
import java.util.Stack;

public class StackDemo1
{
	public static void main(String args[])
	{

		Stack nyitL = new Stack();

		nyitL.push("NYC");
		nyitL.push("OLD WESTBURY");
		nyitL.push("VANCOUVER");
		nyitL.push("NANJING");
		nyitL.push("CENTRAL ISLIP");
		nyitL.push("ABU DHABI");
		nyitL.push("JONESBORO");

		System.out.println("Removed object is: " + nyitL.pop());

		System.out.println("Elements after remove: " + nyitL);

		System.out.println("Element on top is: " + nyitL.peek());




	}

}
```

Programming Assignment 4b: Using Peek

```
package peekdemo1;
import java.util.*;
public class PeekDemo1 {

      public static void main(String[] args) {
       // TODO code application logic here
       Stack cars = new Stack();

       cars.push("JEEP");
       cars.push("HONDA");
       cars.push("TOYOTA");

       System.out.println("Top object is: " + cars.peek());
       System.out.println("Elements after peek: " + cars);
   }

}
```

Programming Challenge 4:

```
import java.util.Scanner;
import java.util.Stack;

public class Retirement_Estimate_401k
{

        public static double investCalc(double newAmount,double interest)
        {
                double percentage = (interest/100);
                //System.out.println("The percentage is... " + percentage);

                return ((newAmount * percentage) + newAmount);
        }
```

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



	Scanner sc = new Scanner(System.in);

	System.out.println("Welcome to the 401k Retirement Estimate" + "\n");

	System.out.println("Please enter the amount you wish to contribute each year:");
	int amount = sc.nextInt();

	System.out.println("Please enter the percentage of interest that you think you will earn each year on average:");
	int interest = sc.nextInt();

	//System.out.println("The calculated amount for $" + amount + " and the interest of " + interest + " is: $" + investCalc(amount,interest));

	Stack stackR = new Stack();
	double newAmount = investCalc(amount, interest);
	String finalValue;


	for(int i = 0; i < 30; i++)
	{

		finalValue = String.format("%.2f", newAmount);

		stackR.push(finalValue);

		newAmount = investCalc(newAmount + amount, interest);

		//System.out.println(stackR);

	}

	int years = 30;
```

```
        while(!stackR.isEmpty())
        {
                System.out.println("Here are your total earnings for the past " + years + " years:
$" + stackR.pop());
                years--;
        }

        }
}
```