**Lab 14: Bank Account (Cumulative Sum)**

**Cumulative means: increasing or growing by successive additions.**

**EX:**

* I opened a bank account at SunTrust Bank
  + in week 1 I put $10 into the bank account
  + In week 2 I put $30 into the bank account
  + In week 3 I put $20 into the bank account
  + In week 4 I put $15 into the bank account
* At the end of four weeks, how much money did I have in the bank?

Week 1 $10

Week 2 $30

Week 3 $20

Week 4 $15

Total Amount = $75

The original amount of money I put in the bank week 1 ($10) stays in the bank. All I am doing is **adding** to my money each week.

**CODE:**

//We use a Scanner to input the money we add each week  
import java.util.Scanner;  
  
public class Cumulative  
{  
 public static void main(String[] args)  
 {  
   
Scanner keyboard = new Scanner(System.in);

// we initialize the bank account to 0  
int bankAccount = 0;

//we add a for loop so we can add money each week. In this case it is 4 weeks  
for(int week=1; week<=4; week++){

//we need to ask how much money is added for the week  
System.out.print("\nHow much money do you want to add for week #"+ week+ "? ");  
int weeklySaving = keyboard.nextInt();

/\* this takes the amount already in the bank account   
and adds what is put in each week to give you the current balance\*/  
bankAccount= bankAccount+weeklySaving;

System.out.println("\tAfter week #" + week + " you have $" + bankAccount);  
 }  
 System.out.println("\t\tAfter a month you have saved $" + bankAccount);  
}  
}

**Now it’s your turn:**

**Cumulative Lab**

Write a short program to practice Cumulative Sum. Name this program **CumulativeSum.java.**

**Do not forget a proper header.**

Write a program that will give the total amount of money you have in your bank account for the following weeks:

**Week 1 $20**

**Week 2 $10**

**Week 3 $5**

**Week 4 $7**

**Week 5 $17**

**Week 6 $23**

**Week 7 $5**

**Week 8 $1**

**Week 9 $12**

**Week 10 $10**

After you have determined the total amount of money in your account in week 10, calculate the **average amount** (1.0 \* (total amount of money/total number of weeks)) that you put into your account each week.

Print out

* how much you saved each week
* how much you saved after week 10
* the average amount you saved each week