Lecture # 4

Homework

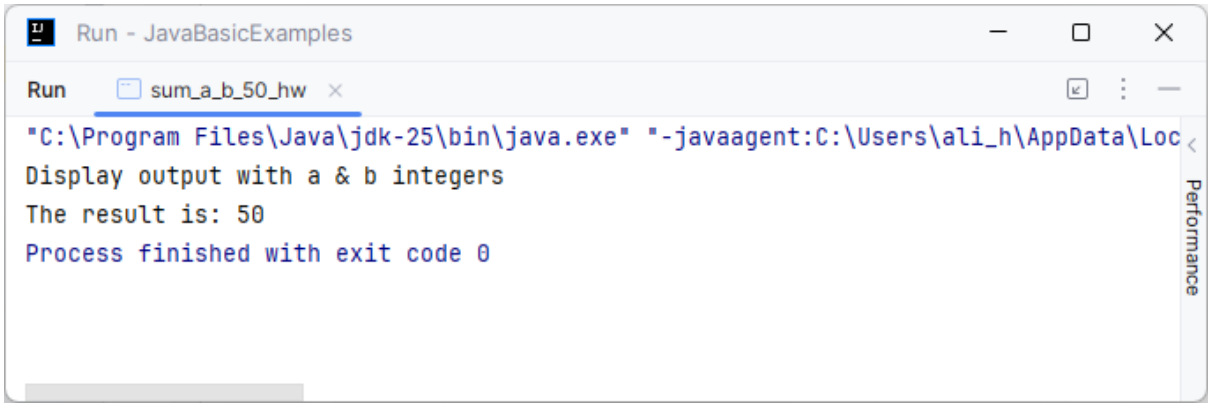
Use print( ) with code to get the following output

Int A=20;

Int B=30;

Output: The result is: 50

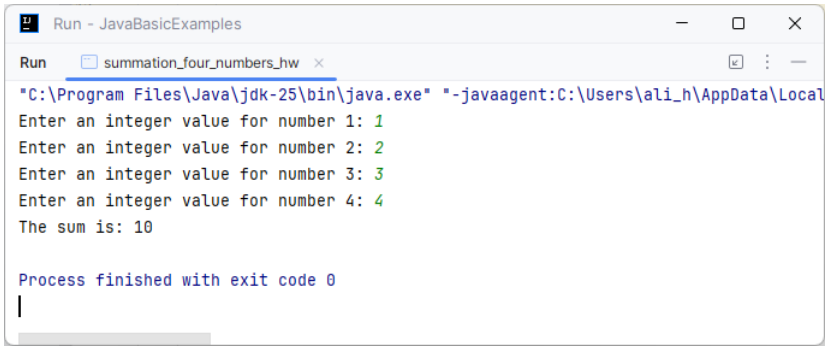
```
package Lecture4;

public class sum_a_b_50_hw {

    public static void main(String[] args) {
        int A = 20;
        int B = 30;

        System.out.println("Display output with a & b integers");
        System.out.print("The result is: " + (A + B));
    }
}
```



Lecture # 6

1. Write a program in Java to read four numbers from the user, then find the summation between them?

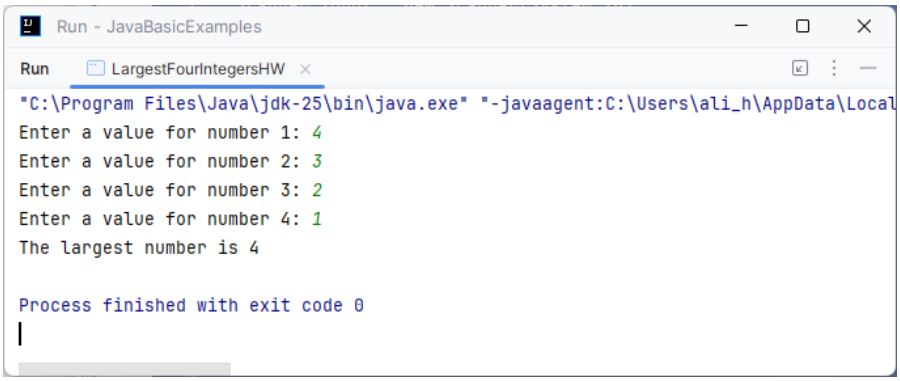
```java
package Lecture6;

import java.util.Scanner;

public class summation_four_numbers_hw {

    public static void main(String[] args) {
        int number, sum = 0;
        String msg, invalid_input_msg;
        Scanner input = new Scanner(System.in);

        msg = "Enter an integer value for number ";
        invalid_input_msg = "Invalid input! Please enter an integer.";

        for (int i = 1; i <= 4; i++) {
            System.out.print(msg + i + ": ");

            while (!input.hasNextInt()){
                System.out.println(invalid_input_msg);
                input.next(); // discard invalid input
                System.out.print(msg + i + ": ");
            }

            number = input.nextInt();
            sum += number;
        }
        input.close();

        System.out.println("The sum is: " + sum);

    }
}
```



Lecture # 6

2. Write a program in Java to read four numbers from the user, then find the largest number between them?

```java
package Lecture6;

import java.util.Scanner;

public class LargestFourIntegersHW {

    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        String msg;
        int number, largest_number = 0;
        msg = "Enter a value for number ";

        for (int i = 1; i <= 4; i++) {
            System.out.print(msg + i + ": ");

            number = input.nextInt();
            if (number > largest_number)
                largest_number = number;

        }

        input.close();
        System.out.println("The largest number is " + largest_number);

    }
}
```



Lecture # 6

3. Write a program in Java to calculate the value of Y from the following equation?

$Y = 1/X^2 - 81.$

```java
package Lecture6;

import java.util.Scanner;

public class CalculateValueOfYHW {
    public static void main(String[] args) {
        String program_name, input_msg, invalid_input_msg, result_msg;
        float x, result;
        Scanner input = new Scanner(System.in);
        program_name = "Y=1/(X²-81)";
        input_msg = "Enter a value for X: ";

        System.out.println(program_name);
        System.out.println();
        System.out.print(input_msg);
        x = input.nextFloat();
        input.close();

        result = 1 / ((x * x) - 81);
        result_msg = "The Value of Y is: " + result;
        System.out.println(result_msg);
    }
}
```

Lecture # 6

4. Write a program to print the student average as follows:

average >100 and average < 0 print “The average is out of range”

average >=0 and average < 50 print “The average is Fail”

average >=50 and average <= 59 print “The average is Accepted”

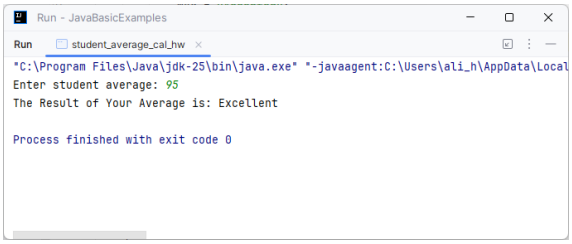
average >=60 and average <= 69 print “The average is Medium”

average >=70 and average <= 79 print “The average is Good”

average >=80 and average <= 89 print “The average is Very Good”

average >=90 and average <= 100 print “The average is Excellent”

```java
package Lecture6;

import java.util.Scanner;

public class student_average_cal_hw {

    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        float student_average;
        String msg;

        System.out.print("Enter student average: ");
        student_average = input.nextFloat();
        input.close();

        if (student_average < 0 || student_average > 100)
            msg = "Out of Range";
        else if (student_average >= 0 && student_average < 45)
            msg = "Fail";
        else if (student_average > 45 && student_average < 50)
            msg = "Passed by carve";
        else if (student_average >= 50 && student_average < 60)
            msg = "Accepted";
        else if (student_average >= 60 && student_average < 70)
            msg = "Medium";
        else if (student_average >= 70 && student_average < 80)
            msg = "Good";
        else if (student_average >= 80 && student_average < 90)
            msg = "Very Good";
        else if (student_average >= 90)
            msg = "Excellent";
        else
            msg = "Invalid Input";

        System.out.println("The Result of Your Average is: " + msg);
    }

}
```



Output

Lecture # 7

1. Write a program to print the student average as follows: using switch case statement:

    average >100 and average < 0 print “The average is out of range”

    average >=0 and average < 50 print “The average is Fail”

    average >=50 and average <= 59 print “The average is Accepted”

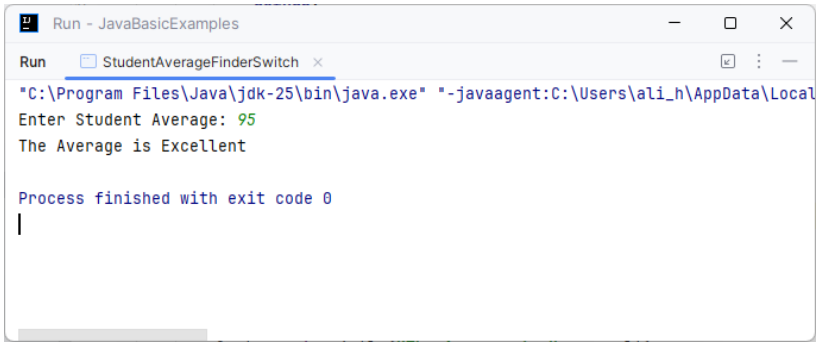
    average >=60 and average <= 69 print “The average is Medium”

    average >=70 and average <= 79 print “The average is Good”

    average >=80 and average <= 89 print “The average is Very Good”

    average >=90 and average <= 100 print “The average is Excellent”

```java
package Lecture7;

import java.util.Scanner;

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

        Scanner input = new Scanner(System.in);
        System.out.print("Enter Student Average: ");
        int student_average = input.nextInt();
        input.close();

        if (student_average < 0 || student_average > 100) {
            System.out.println("Out of Range");
            return;
        }

        String result = switch (student_average / 10) {
            case 10 -> "Excellent";
            case 9 -> "Excellent";
            case 8 -> "Very Good";
            case 7 -> "Good";
            case 6 -> "Medium";
            case 5 -> "Accepted";
            default -> "Fail";
        };

        System.out.println("The Average is " + result);
    }
}
```



2. Write a program in Java to read number a month of the year, then print the name of the month?

```java
package Lecture7;

import java.util.Scanner;

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

        Scanner input = new Scanner(System.in);
        System.out.print("Enter Month number in the year: ");
        int month = input.nextInt();
        input.close();

        String monthName = switch (month) {
            case 1 -> "January";
            case 2 -> "February";
            case 3 -> "March";
            case 4 -> "April";
            case 5 -> "May";
            case 6 -> "June";
            case 7 -> "July";
            case 8 -> "August";
            case 9 -> "September";
            case 10 -> "October";
            case 11 -> "November";
            case 12 -> "December";
            default -> "Invalid";
        };

        System.out.println("The name of the month is: " + monthName);

    }
}
```