20MCA132 OBJECT ORIENTED PROGRAMMING LAB

ASSIGNMENT-1

SUBMITTED BY

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SUBMITTED TO ,

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1.Read a matrix from the console and check whether it is symmetric or not.

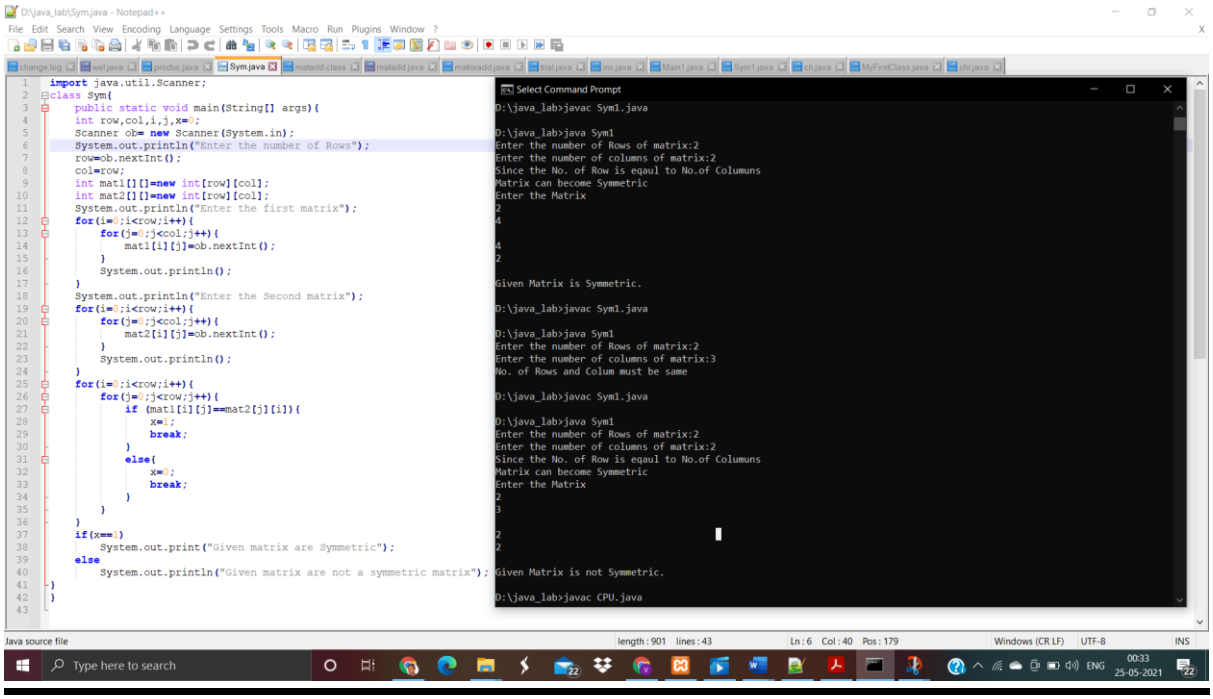
PROGRAM

```
import java.util.Scanner;
class Sym1
{
	public static void main(String[] args)
	{
		int row,col,i,j;
		int x=0;
		Scanner ob= new Scanner(System.in);
		System.out.print("Enter the number of Rows of matrix:");
		row=ob.nextInt();
		System.out.print("Enter the number of columns of matrix:");
		col=ob.nextInt();
		if(col==row)
		{
				System.out.println("Since the No. of Row is eqaul to No.of Columuns \nMatrix can become Symmetric");
		}
		else
		{
			System.out.println("No. of Rows and Colum must be same");
			System.exit(0);//to exit the program

		}
		int mat[][]=new int[row][col];
		System.out.println("Enter the Matrix");
		for(i=0;i<row;i++)
		{
```

```
                for(j=0;j<col;j++)
                {
                        mat[i][j]=ob.nextInt();
                }
                System.out.println();
        }
        for(i=0;i<row;i++)
        {
                for(j=0;j<row;j++)
                {
                        if (mat[i][j]==mat[j][i])
                        {
                                x=1;
                                //System.out.println("Given matrix are Symmetric");
                                break;
                        }

                        else
                        {
                                x=0;
                                //System.out.println("Given matrix are not a symmetric
matrix");
                                break;
                        }
                }
        }
        if (x==1)
        {
                System.out.println("Given Matrix is Symmetric.");
        }
        else
```

```
        {
            System.out.println("Given Matrix is not Symmetric.");
        }
}
}
```

OUTPUT



2. Create CPU with attribute price. Create inner class Processor (no. of cores, manufacturer)
and static nested class RAM (memory, manufacturer). Create an object of CPU and print
information of Processor and RAM.

PROGRAM

```
class CPU
{
	double x=1000.00;
	class Processor
	{
		int y=10;
		String i="Microsoft";
		static class Ram
		{
			String j="5GB";
			String k="Intel";
		}
	}
}
public class ch
{
	public static void main(String[] args)
	{
		CPU Co = new CPU();
		CPU.Processor Po = Co.new Processor();
		CPU.Processor.Ram Ro= new CPU.Processor.Ram();
		System.out.println(Co.x);
		System.out.println(Po.y);
		System.out.println(Po.i);
		System.out.println(Ro.j);
```

```
                System.out.println(Ro.k);
        }
}
```

OUTPUT