```
/*
 * Name:Shlok yadav
 * Roll no:S-64
 */



import java.util.Scanner;
class Matrix
{
   public static void main(String args[])
{
        System.out.println("Enter the no. of rows: ");
        Scanner m = new Scanner(System.in);
        int row = m.nextInt();
        System.out.println("Enter the no. of columns: ");
        int columns = m.nextInt();

        int[][] first = new int[row][columns];
        int[][] second = new int[row] [columns];

        for(int r=0;r<row;r++)
{
        for(int c=0; c<columns; c++)
{
      System.out.println(String.format("Enter first[%d][%d] intger",r,c));
          first[r][c]=m.nextInt();
}
}


   for(int r=0;r<row;r++)
{
    for(int c=0;c<columns;c++)
 {
    System.out.println(String.format("Enter second[%d][%d] intger",r,c));
      second[r][c] = m.nextInt();
}
}

   System.out.println("First matrix: \n");
   print2dArray(first);

   System.out.println("Second matrix:\n");
   print2dArray(second);


System.out.println("****Main****");
System.out.println("1.Additon");
System.out.println("2.Sutraction");
```

```
System.out.println("3.Multiplication");
System.out.println("4.Exit");
System.out.println("Enter your option: ");
int option = m.nextInt();

switch(option)
{
  case 1:
   sum(first,second);
    break;
  case 2:
    subtract(first,second);
     break;
  case 3:
    multiply(first,second);
     break;
}
}



 private static void sum(int[][] first, int[][] second) {
                int row = first.length;
                int column = first[0].length;
                int[][] sum = new int[row][column];

                for (int r = 0; r < row; r++) {
                        for (int c = 0; c < column; c++) {
                                sum[r][c] = first[r][c] + second[r][c];
                        }
                }

                System.out.println("\nSum of Matrices:\n");
                print2dArray(sum);
        }


 static void subtract(int[][] first, int[][] second) {
        int row = first.length;
        int column = first[0].length;
        int[][] sum = new int[row][column];

        for (int r = 0; r < row; r++) {
                for (int c = 0; c < column; c++) {
                        sum[r][c] = first[r][c] - second[r][c];
                }
        }

        System.out.println("\nSubtraction of Matrices:\n");
        print2dArray(sum);
```

```
}

 static void multiply(int[][] first, int[][] second) {
        int row = first.length;
        int column = first[0].length;
        int[][] sum = new int[row][column];

        for (int r = 0; r < row; r++) {
                for (int c = 0; c < column; c++) {
                        sum[r][c] = first[r][c] * second[r][c];
                }
        }

        System.out.println("\nMultiplication of Matrices:\n");
        print2dArray(sum);
}

   private static void print2dArray(int[][] matrix) {
                for (int r = 0; r < matrix.length; r++) {
                        for (int c = 0; c < matrix[0].length; c++) {
                                System.out.print(matrix[r][c] + "\t");
                        }
                        System.out.println();
                }
        }

}

/*
 * Enter the no. of rows:
5
Enter the no. of columns:
5
Enter first[0][0] intger

 */
```