

Using classes

# String class

```
import java.util.Scanner;
public class StringExamples
{
    public static void main (String[]args){
        Scanner scan=new Scanner(System.in);
        String name;
        System.out.println("Please enter your name");
        name=scan.next();
        System.out.println("Your name is : " +name);
        System.out.println("The length of your name is: "+name.length());
        System.out.println("The second letter in your name is:
"+name.charAt(1));
        System.out.println("Your name in capitals is: "+name.toUpperCase());
        System.out.println("The first 3 letters of your name are:
"+name.substring(0,3));
        //start at 0 till index 3-1
    }
}
```

# הפלט:

Please enter your name

Yossi

Your name is :Yossi

The length of your name is: 5

The second letter in your name is: o

Your name in capitals is: YOSSI

The first 3 letters of your name are: Yos

# תרגיל

כתבו תוכנית הקולטת סיסמא מהמשתמש.  
אם הסיסמא אינה באורך 8 יודפס הודעת שגיאה.  
אם היא באורך 8 יש לבדוק שהתו הראשון הוא  
אות מהאלף בית האנגלי ושהתו האחרון הוא  
הסימן ?.

אם הסיסמא אינה חוקית יש להדפיס הודעה  
מתאימה. אם הסיסמא חוקית יש לקלוט את  
הסיסמא שוב ולבדוק אם הוקלד בדיוק אותה  
סיסמא. יש להדפיס הודעה מתאימה.

```
import java.util.Scanner;
public class Password
{
    public static void main (String[]args)
    {
        Scanner scan=new Scanner(System.in);
        final int LENGTH=8;
        String password;
        System.out.println("Please enter your password- "+LENGTH+" characters starting with letter
        ending with ?");
        password=scan.next();
        if(password.length()!=LENGTH)
            System.out.println("wrong length");
        else
        {
            char first=password.charAt(0);
            if((((first>='a'&& first<='z')||(first>='A'&& first<='Z'))&&password.charAt(LENGTH-1)=='?')
            {
                String password2;
                System.out.println("Please enter your password again") ;
                password2=scan.next();
                if(password.equals(password2))
                    System.out.println("all ok");
                else
                    System.out.println("password not the same");
            }
            else
                System.out.println("illegal password");
        }
    }
}
```

# Math class

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

        double x=4,y,z,ab;
        y=Math.sqrt(x);
        System.out.println("The sqrt of 4 is: "+ y);
        z=Math.pow(x,2);
        System.out.println("4 squared is: "+z);
        ab= Math.abs(y-z);
        System.out.println("The difference is: "+ab);

    }
}
```

## הפלט:

The sqrt of 4 is: 2.0

4 squared is: 16.0

The difference is: 14.0

# Random class

```
import java.util.Random;
public class RandomExamples
{
    public static void main (String[]args){
        int x,y,z;
        Random generator= new Random();
        x=generator.nextInt(10)+1;
        y=generator.nextInt(100)+1;
        z=generator.nextInt(6)+1;
        System.out.println("A random number between 1 and 10: "+ x);
        System.out.println("A random number between 1 and 100: "+ y);
        System.out.println("A random number between 1 and 6: "+ z);
    }
}
```



## הפלט:

A random number between 1 and 10: 6

A random number between 1 and 100: 23

A random number between 1 and 6: 3

# ציור בית

```
public class House {  
    public static void main (String [] args){  
        Circle circle1=new Circle();  
        circle1.makeVisible();  
        circle1.changeColor("yellow");  
        circle1.moveHorizontal(170);  
        Square square1=new Square();  
        square1.makeVisible();  
        square1.changeSize(100);  
        square1.changeColor("magenta");  
        square1.moveVertical(100);  
        square1.moveHorizontal(50);  
        Triangle triangle1=new Triangle();  
        triangle1.makeVisible();  
        triangle1.moveHorizontal(110);  
        triangle1.moveVertical(35);  
        triangle1.changeColor("blue");  
        triangle1.changeSize(100,100);  
        Square square2=new Square();  
        square2.makeVisible();  
        square2.moveVertical(110);  
        square2.moveHorizontal(100);  
    }  
}
```