

Java Basics

Michael Wagner

Java

- 1995
- Virtual machine
- Hundreds of libraries



Basics

```
import java.util.Scanner;

public class Demo
{
    public static void main(String[] args)
    {
        System.out.println("Welcome to Java!");

        double user_input1, user_input2, result;
        Scanner keyboard = new Scanner(System.in);

        System.out.println("Enter two numbers");
        user_input1 = keyboard.nextDouble();
        user_input2 = keyboard.nextDouble();

        result = user_input1 + user_input2;

        System.out.println("Sum: " + result);
    }
}
```

Basics

```
import java.util.Scanner;

public class Demo
{
    public static void main(String[] args)
    {
        Scanner keyboard = new Scanner(System.in);

        System.out.println("Enter your full name");

        String user_input = keyboard.nextLine();

        if (user_input.equals("no"))
        {
            System.out.println("Fine then.  Goodbye.");
        }
        else
        {
            System.out.println("Thanks " + user_input + ".  You rock!");
            System.out.println("You entered " + user_input.length() + " characters.");
        }
    }
}
```

Example

Prompt the user for his/her name and age.
Determine if the user is old enough to run for
President.

Basics

```
import java.io.File;
import java.io.FileNotFoundException;
import java.util.Scanner;

public class Demo
{
    public static void main(String[] args)
    {
        File f = new File("Romeo_and_Juliet.txt");
        int word_count = 0;

        try
        {
            Scanner s = new Scanner(f);

            while (s.hasNext())
            {
                String word = s.next();
                if (word.contains("Romeo"))
                {
                    word_count++;
                }
            }

            System.out.println("Found " + word_count + " instances of Romeo");
        }
        catch (FileNotFoundException e)
        {
            System.out.println("File not found.");
        }
    }
}
```

Basics

```
import java.util.Scanner;

public class Demo
{
    public static double findAverage(double num_list[])
    {
        double result = 0;
        for (int x = 0; x < num_list.length; x++)
        {
            result += num_list[x];
        }
        result = result / num_list.length;
        return result;
    }

    public static void main(String[] args)
    {
        Scanner keyboard = new Scanner(System.in);

        System.out.println("How many numbers do you have?");
        int count = keyboard.nextInt();

        double some_numbers[] = new double[count];

        for (int x = 0; x < some_numbers.length; x++)
        {
            System.out.println("Enter number " + x);
            some_numbers[x] = keyboard.nextDouble();
        }

        double result = findAverage(some_numbers);
        System.out.println("Average: " + result);
    }
}
```

Example

Prompt the user for a word. Determine if that word is spelled correctly.

Basics

```
import javax.swing.JOptionPane;

public class Demo
{
    public static void main(String[] args)
    {
        String input = JOptionPane.showInputDialog("Enter your favorite movie");
        if (input == null)
        {
            System.out.println("You clicked cancel.");
        }
        else
        {
            System.out.println("I give that movie a 9/10");
        }
    }
}
```

