Computer Science 1, 1412

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COMSC 1033 HW 3

1. In this program, it ask you to enter any number in feet and then it converts it into meters.

Program:

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/\*\*

\* **@author** RJ

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**import** java.util.Scanner; // Scanner is in the java.util package

**public** **class** homework4 {

/\*\*

\* **@param** args

\*/

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

Scanner input = **new** Scanner(System.*in*); // created a scanner

System.*out*.print("enter a number for feet: "); // asked for a number

**double** feet = input.nextDouble();

**double** meter = feet \* .305; // eguation to convert feet to meters

System.*out*.println(feet + " feet converted to meters is " + meter + " meters");

}

}

Console:

enter a number for feet: 16.5

16.5 feet converted to meters is 5.0325 meters

Instead of just having one number it converts, I created it so that the user could choose any number and it would convert it. I have gotten better at using the scanner output so I implemented it into this program.

1. This program asks the user for a starting velocity, ending velocity, and time span. Once the user has given it those three values, it finds the average acceleration of the two velocities.

Program:

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\* **@author** RJ

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\*/

**import** java.util.Scanner;

**public** **class** homework6 {

/\*\*

\* **@param** args

\*/

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

// programs gets three numbers and finds the average acceleration from those three numbers

Scanner input = **new** Scanner(System.*in*); // created a scanner

System.*out*.print("select a starting velocity: ");

**double** startvelocity = input.nextDouble(); // asks for a starting velocity

System.*out*.print("select an ending velocity: ");

**double** endvelocity = input.nextDouble(); // ask for an ending velocity

System.*out*.print("select a time span: ");

**double** timespan = input.nextDouble(); // asks for a time span

**double** average\_acceleration = (endvelocity - startvelocity) / timespan;

//equation to get the average acceleration

System.*out*.print("The average acceleration is " + average\_acceleration);

}

}

Console:

select a starting velocity: 5.5

select an ending velocity: 50.9

select a time span: 4.5

The average acceleration is 10.088888888888889

This code asks the user to supply three different numbers. Now you can change up the numbers and the program will still solve it. I have gotten a lot better at the scanner function and it was fun creating something that request three different numbers!

1. This program ask for temperature and wind speed so it can tell you what the wind chill index is.

Program:

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/\*\*

\* **@author** RJ

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**import** java.util.Scanner;

**public** **class** homework5 {

/\*\*

\* **@param** args

\*/

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

// this program asks for the temperature and wind speed to find the wind chill index.

Scanner input = **new** Scanner(System.*in*); // created a scanner

System.*out*.print("Enter the temperature in Fahrenheait betweeen -58 degrees and 41 degrees: ");

// ask for a temperature

**double** windspeed = input.nextDouble();

System.*out*.print("Enter the wind speed greater than or equal to 2 in miles per hour: ");

// ask for a wind speed

**double** temperature = input.nextDouble();

**double** windchill = 35.74 + .6215 \* temperature - 35.75 \* Math.*pow*(windspeed, 0.16) + .4275 \*

temperature \* Math.*pow*(windspeed, 0.16); // equation to find wind chill

System.*out*.print("the wind chill index is " + windchill); // told it to say it in the console

}

}

Console:

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/\*\*

\* **@author** RJ

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\*/

**import** java.util.Scanner;

**public** **class** homework5 {

/\*\*

\* **@param** args

\*/

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

// this program asks for the temperature and wind speed to find the wind chill index.

Scanner input = **new** Scanner(System.*in*); // created a scanner

System.*out*.print("Enter the temperature in Fahrenheait betweeen -58 degrees and 41 degrees: ");

// ask for a temperature

**double** temperature = input.nextDouble();

System.*out*.print("Enter the wind speed greater than or equal to 2 in miles per hour: ");

// ask for a wind speed

**double** windspeed = input.nextDouble();

**double** windchill = 35.74 + (0.6215 \* temperature) - (35.75 \* Math.*pow*(windspeed, 0.16)) + (0.4275 \*

temperature \* Math.*pow*(windspeed, 0.16)); // equation to find wind chill

System.*out*.print("the wind chill index is " + windchill); // told it to say it in the console

}

}

Console:

Enter the temperature in Fahrenheait betweeen -58 degrees and 41 degrees: 5.3

Enter the wind speed greater than or equal to 2 in miles per hour: 6

the wind chill index is -5.567068455881625

This one taught me to request a number between two given points. This has allowed me to fully understand all the programming we have done so far. It has also taught me how to use numbers to a certain power in programming which is extremely helpful.