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CECS 100

12/2/15

Homework 9

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\* CECS 100

\* Homework 9

\* 12/2/2015

\* Distance Calculator using methods

\*/

**import** java.util.Scanner;

**public** **class** Hmw9 {

**public** **static** **void** menu(**int** selection)

{ System.***out***.println("Welcome to distance calculator");

System.***out***.println("Please select from the following");

System.***out***.println("1 - Run the program");

System.***out***.println("2 - Exit the program");

}

/\*

\*This method is for the menu.

\*It is not suppose to input or output anything

\*menu()- this is the way the method is called in the main

\*/

**public** **static** **int** getVal(){

Scanner pg= **new** Scanner(System.***in***);

**int** var= pg.nextInt();

**return** var;

/\*

\* This is used to get the value from the user

\* It is supposed to return the var

\* getVal()- this is the way the method is called in the main

\*/

}

**public** **static** **boolean** valid(**int** var){

**if** ((var<0) || (var>2))

**return** **false**;

**else**

**return** **true**;

}

/\*

\* using boolean in this method for the validation

\* using if condition to process the input

\* it has parameter var inside it

\* vaid()- this is the way the method is called in the main

\*/

**public** **static** **int** CalculateD(**int** x, **int** y){

**int** distance= x\*y;

**return** distance;

}

/\*

\* this is used to calculate distance

\* there is no input value entered but it returns an integer value

\* CalculateD()-this is the way the method is called in the main

\*/

**public** **static** **int** prompt(){

System.***out***.println("Please enter the speed in MPH");

**return** 0;

}

/\*

\* this is used to ask the question from the user about the speed

\* it inputs nothing but returns a value

\* prompt- this is the way it is called in the main

\*/

**public** **static** **int** prompt2(){

System.***out***.println("Please enter the time");

**return** 0;

}

/\*

\* this is used to ask the question from the user about the hours

\* it inputs nothing but returns a value

\* prompt2- this is the way it is called in the main

\*/

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

{

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

Scanner key = **new** Scanner(System.***in***);

**int** val = 0;

**do**{

//using do while to perform my code

*menu*(0);

//calling menu method

**int** val1;

val1 = key.nextInt();

//running the code if the val1 = 1

//getting the value from the user

**if** (val1 ==1){

**int** time , speed , hour;

// declaraton of the integerd

**double** distance;

//prompt()

**int** a;

//declared integer a to use the method prompt

a=*prompt*();

//System.out.println("What is the speed of the vehicle in MPH?");

speed = key.nextInt();

//using while statement to check the speed

**while**(speed<=0)

{

System.***out***.println("What is the speed of the vehicle in MPH? ");

speed = key.nextInt();

}

//prompt2()

**int** b;

//declared integer b to use the methof prompt2

b=*prompt2*();

//getting time from the user

//System.out.println("How many hours has the vehicle traveled?");

time = key.nextInt();

//again using the while statement to check the time

**while**(time<=0)

{

System.***out***.println("Please enter a valid time ");

time = key.nextInt();

}

//displaying the time for the user

System.***out***.println("Hour Distance");

System.***out***.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");

hour = 0;

**for**( **int** x = 1; x<=time;x++ )

{

hour++;

**if**(hour>1)

{ //CalculateD()

//first need to declare an integer so that it can be used in the main

**int** c;

c= *CalculateD*(time, speed);

//distance = time \* speed;

System.***out***.println(time+ " " +c);}

}

}

//completing the do while statement that started earlier in the program

}**while** (val!=2);

System.***out***.println("Exitting the program");

//end of do while loop

}// end of main

}//end of class

Outputs:

Welcome to distance calculator

Please select from the following

1 - Run the program

2 - Exit the program

1

Please enter the speed in MPH

12

Please enter the time

2

Hour Distance

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 24

Welcome to distance calculator

Please select from the following

1 - Run the program

2 - Exit the program

1

Please enter the speed in MPH

-2

What is the speed of the vehicle in MPH?

12

Please enter the time

2

Hour Distance

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 24

Welcome to distance calculator

Please select from the following

1 - Run the program

2 - Exit the program

2

Exiting the program

Welcome to distance calculator

Please select from the following

1 - Run the program

2 - Exit the program

-1

Welcome to distance calculator

Please select from the following

1 - Run the program

2 - Exit the program