CarpetCalculator.cs

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\* Defines the template for the

\* CarpetCalculator class to include constructors,

\* accessors, mutators, and properties

\*/

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace CarpetCalculatorApp

{

public class CarpetCalculator

{

private double pricePerSqYard;

private double noOfSqYards;

// Property of the pricePerSqYard data field

public double PricePerSqYard

{

get

{

return pricePerSqYard;

}

set

{

pricePerSqYard = value;

}

}

// Property also associated with

// pricePerSqYard - works but does

// not follow naming convention

public double Price

{

get

{

return pricePerSqYard;

}

set

{

pricePerSqYard = value;

}

}

// Property for noOfSqYards data field

public double NoOfSqYards

{

get

{

return noOfSqYards;

}

set

{

noOfSqYards = value;

}

}

// Default Constructor

public CarpetCalculator()

{

//empty body

}

// One argument constructor

public CarpetCalculator(double price)

{

pricePerSqYard = price;

}

// Two argument constructor

public CarpetCalculator(double amountNeeded, double price)

{

noOfSqYards = amountNeeded;

pricePerSqYard = price;

}

public double DetermineTotalCost()

{

return (pricePerSqYard \* noOfSqYards);

}

// One of the overloaded Mutator methods

public void SetNoOfSqYards(double length,

double width)

{

const int SQ\_FT\_PER\_SQ\_YARD = 9;

noOfSqYards = length \* width

/ SQ\_FT\_PER\_SQ\_YARD;

}

// One of the overloaded Mutator methods

public void SetNoOfSqYards(double squareYards)

{

noOfSqYards = squareYards;

}

// Accessor method

public double GetNoOfSqYards()

{

return noOfSqYards;

}

public override string ToString()

{

return "Price Per Square Yard: " +

pricePerSqYard.ToString("C") +

"\nTotal Square Yards: " +

noOfSqYards.ToString("F1") +

"\nTotal Price: " +

DetermineTotalCost().ToString("C");

}

}

}