**MINDTAP**

8- 4

Create a program named *TipCalculation* that includes two overloaded methods named DisplayTipInfo.

One should accept a meal price and a tip as doubles (for example, 30.00 and 0.20, where 0.20 represents a 20 percent tip).

The other should accept a meal price as a double and a tip amount as an integer (for example, 30.00 and 5, where 5 represents a $5 tip).

Each method displays the meal price, the tip as a percentage of the meal price, the tip in dollars, and the total of the meal plus the tip. Include a Main() method that demonstrates each method.

For example if the input meal price is **30.00** and the tip is **0.20**, the output should be:

Meal price: $30.00. Tip percent: 0.20

Tip in dollars: $6.00. Total bill $36.00

static void Main()

{

double price = 30.00;

double tipRate = 0.20;

int tipInDollars = 5;

DisplayTipInfo(price, tipRate);

DisplayTipInfo(price, tipInDollars);

}

public static void DisplayTipInfo(double price, double tipRate)

{

double tipInDollars = price \* tipRate;

double total = price + tipInDollars;

WriteLine("Meal price: {0}. Tip percent: {1:F2}", price.ToString("C", CultureInfo.GetCultureInfo("en-US")), tipRate);

WriteLine("Tip in dollars: {0}. Total bill {1}", tipInDollars.ToString("C", CultureInfo.GetCultureInfo("en-US")), total.ToString("C", CultureInfo.GetCultureInfo("en-US")));

}

public static void DisplayTipInfo(double price, int tipInDollars)

{

double tipRate = tipInDollars / price;

double total = price + tipInDollars;

WriteLine("Meal price: {0}. Tip percent: {1:F2}", price.ToString("C", CultureInfo.GetCultureInfo("en-US")), tipRate);

WriteLine("Tip in dollars: {0}. Total bill {1}", tipInDollars.ToString("C", CultureInfo.GetCultureInfo("en-US")), total.ToString("C", CultureInfo.GetCultureInfo("en-US")));

}

}

8-8

Write a program named *Movie* that contains a method named DisplayMovie that accepts and displays two parameters:

* A string name of a movie
* An integer running time in minutes

For example, if the movie name is **Titanic** and its length is **182** minutes, the output should be:

using static System.Console;

class Movie

{

static void Main()

{

DisplayMovie ("Titanic, 182");

DisplayMovie ("Ironman");

}

public static void DisplayMovie(string title, int minutes = 90)

{

WriteLine($"The movie {title} has a running time of {minutes} minutes.");

}

}

9-1

Create an application named *TestSoccerPlayer* that instantiates and displays a SoccerPlayer object. The SoccerPlayer class contains the following properties:

* Name - The player’s name ( a string)
* JerseyNum - The player's jersey number (an integer)
* Goals - Number of goals scored (an integer)
* Assists - Number of assists (an integer)

public static void Main()

{

SoccerPlayer player = new SoccerPlayer

{

Name = "Messi",

JerseyNum = 10,

Goals = 50,

Assists = 50

};

WriteLine(player);

}

}

class SoccerPlayer

{

public string Name { get; set; }

public int JerseyNum { get; set; }

public int Goals { get; set; }

public int Assists { get; set; }

public override string ToString()

{

return $"Name: {Name}\nJersey Number: {JerseyNum}\nGoals: {Goals}\nAssists: {Assists}";

}

}

9-2

Create an application named *TestClassifiedAd* that instantiates and displays at least two ClassifiedAd objects. A ClassifiedAd has fields for a Category (For example, **Used Cars** and **Help Wanted**), a number of Words, and a price. Include properties that contain get and set accessors for the category and number of words, but only a get accessor for the price. The price is calculated at nine cents per word.

{

public static void Main()

{

ClassifiedAd ad1 = new ClassifiedAd();

ad1.Category = "Used Cars";

ad1.NumWords = 100;

ClassifiedAd ad2 = new ClassifiedAd();

ad2.Category = "Help Wanted";

ad2.NumWords = 60;

WriteLine("The classified ad with {0} words in category {1} costs {2}", ad1.NumWords, ad1.Category, ad1.Price.ToString("C", CultureInfo.GetCultureInfo("en-US")));

WriteLine("The classified ad with {0} words in category {1} costs {2}", ad2.NumWords, ad2.Category, ad2.Price.ToString("C", CultureInfo.GetCultureInfo("en-US")));

}

}

class ClassifiedAd

{

public string Category { get; set; }

public int \_words;

// publid double price;

public double Price

{

get {

return \_words \* 0.09;

}

}

public int NumWords

{get{return \_words;}

set{\_words = value;}}

}

10-1

Create an application class named LetterDemo that instantiates objects of two classes named Letter and CertifiedLetter and that demonstrates all their methods.

The classes are used by a company to keep track of letters they mail to clients. The Letter class includes auto-implemented properties for the Name of the recipient and the Date mailed (stored as strings).

{

static void Main()

{

Letter letterone = new Letter();

CertifiedLetter lettertwo = new CertifiedLetter();

letterone.Name = "Letter";

letterone.Date = "11/28/2023";

lettertwo.Name = "Certified";

lettertwo.TrackingNumber = "1234";

WriteLine(letterone);

WriteLine(lettertwo);

}

}

class Letter

{

public string Name {get; set;}

public string Date {get; set;}

public override string ToString()

{

return $"Letter - Recipient: {Name}, Date Mailed: {Date}";

}

}

class CertifiedLetter : Letter

{

public string TrackingNumber {get; set;}

}