EGG202

Lab 2: Phone Bill

Description

For this lab, you will need to write a C# program using command line interface to compute the amount for a cell phone bill plan. The program will have up to 3 inputs, first a string to denote a regular plan then an amount of minutes, or to denote a premium plan then an amount of day minutes and night minutes. The cost for each plan goes as follows

- For a regular plan, the amount will be $10 PLUS $0.20 for every minute over 50
- For a premium plan, the amount will be $25 PLUS $0.10 for every day minute over 75 PLUS $0.05 for every night minute over 100

Your program then outputs the plan type, the amount of minutes over, and the then final amount. You do not need to format the output perfectly. You would need to use a constant to store any of the numbers used above, so at the very top of your program right below the class (above `static void Main(string[] args)`) you would have

```
const int REGULAR_RATE = 10;
const int PREMIMUM_RATE = 25;
const double REG_RATE_OVER = 0.2;
```

And use these constants instead of literal integer or decimal values. Here is some skeleton code to help you get started

```
static void Main(string[] args)
{
  string planType;
  int regMinutes;
  int premDayMinutes, premNightMinutes;

  Console.Write("Enter service plan: ");
  planType = Console.ReadLine().ToUpper();

  if (planType == "REGULAR")
  {
    //read in the amount minutes in regMinutes
    //perform the computation and output
  }
  else if (planType == "PREMIUM")
  {
    //read in the amount of day minutes and night
    //minutes and perform the computation and output
  }
  else
  {
    //Plan not recognized, give some error message
  }
}
```

Extra Credit Opportunity

You can be awarded extra points if you can add the following features into your program

- Terminate the program or re-prompt if an invalid number is read, you can use the following function

  ```
  bool valid;
  int number;
  string numString;

  //input from user is stored into numString

  valid = int.TryParse(numString, out number);
  ```

  If valid contains `true`, then numString was able to be converted and number contains the converted number, valid contains `false`, then it was not able to convert

- Have the program menu driven, i.e. asks the user if they want to continue (if they enter yes it will start the program again, if they enter no then the program will stop), you would need a `while` or `do while` wrapped around your program

Sample Run

You don't need to put dashes at the end, I just put them there to make it easier to parse each output case

```
Enter service plan: Regular
Enter minutes: 78

Minutes Over                            28
Cost                         $      15.60

Enter service plan: ReGuLaR
Enter minutes: 44

Service - REGULAR
Minutes Over                             0
Cost                         $      10.00
----------------------------------------------
Enter service plan: premium
Enter day and night minutes: 99 147

Service - PREMIUM
Day Minutes Over                        24
Night Minutes Over                      47
Cost                         $      29.75
----------------------------------------------
Enter service plan: PrEmIuM
Enter day and night minutes: 88 99

Service - PREMIUM
Day Minutes Over                        13
Night Minutes Over                       0
Cost                         $      26.30
----------------------------------------------
Enter service plan: PREMIUM
Enter day and night minutes: 74 156
```

```
Service - PREMIUM
Day Minutes Over                        0
Night Minutes Over                     56
Cost                         $      27.80
---------------------------------------------
Enter service plan: PREMIUM
Enter day and night minutes: 70 90

Service - PREMIUM
Day Minutes Over                        0
Night Minutes Over                      0
Cost                         $      25.00
---------------------------------------------
Enter service plan: MyPlan

Plan entered is not recognized
```

Submission

Compress your project files into a zip file and upload to the canvas site by the deadline