1. Write a C# Sharp program to check whether a given string is a valid Hex code or not. Return true if this string is a valid code otherwise false.
Sample Data:
("#CD5C5C") -> True
("#f08080") -> True
("#E9967A") -> True
("#EFFA07A") -> False

2. Write a C# Sharp program to calculate the average word length in a given string. Round the average length up to two decimal places.
Sample Data:
("CPP Exercises." -> 6
("C# syntax is highly expressive, yet it is also simple and easy to learn.") -> 4
(“C# is an elegant and type-safe object-oriented language") -> 5.62

3. Write a C# Sharp program to check whether a given string of characters can be transformed into a palindrome. Return true otherwise false.
Sample Data:
("amamd") -> True
("pamamd") -> False
("ferre") -> True

4. Write a C# Sharp program to validate a password of length 7 to 16 characters with the following guidelines:
• Length between 7 and 16 characters.
• At least one lowercase letter (a-z).
• At least one uppercase letter (A-Z).
• At least one digit (0-9).
• Supported special characters: ! @ # $ % ^ & * ( ) + = _ - { } [ ] : ; " ' ? < > , .
Sample Data:
("Suuu$21g@") -> True
("W#1g@") -> False
("a&&g@") -> False
("sdsd723#$Amid") -> True
("sdsd723#$Amidkiouy") -> False

5. Write a C# Sharp program to check whether two given strings contain the same character pattern.
Sample Data:
("AACC", "PPRR") -> True
("FFGG", "ADAD") -> False

6. Write a C# Sharp program to check for repeated occurrences of words in a given string.

Sample Data:
("C# C# syntax is highly expressive, yet it is is also simple and easy to to learn learn.") -> 3 matches found
("Red Green Green Black Black Green.") -> 2 matches found

7. Write a C# Sharp program to check whether a given string represents a currency value or has the correct format to represent a currency value.

8. Write a C# Sharp program to remove special characters from given text. Return the updated string which allows alphanumeric characters, spaces, underscores _ and dashes - .
Sample Data:
("AA@%^&CC") -> "AACC"
("Python") -> "Python"
("google.com") -> "googlecom"

9. Write a C# Sharp program to locate the word “C#” in a given string. If the word "C#" is found, return “C# document found.” otherwise return “Sorry no C# document!”.
Sample Data:
("C# Exercises") -> "C# document found."
("Python Exercises") -> "Sorry no C# document!"
("Tutorial on c#") -> "C# document found."