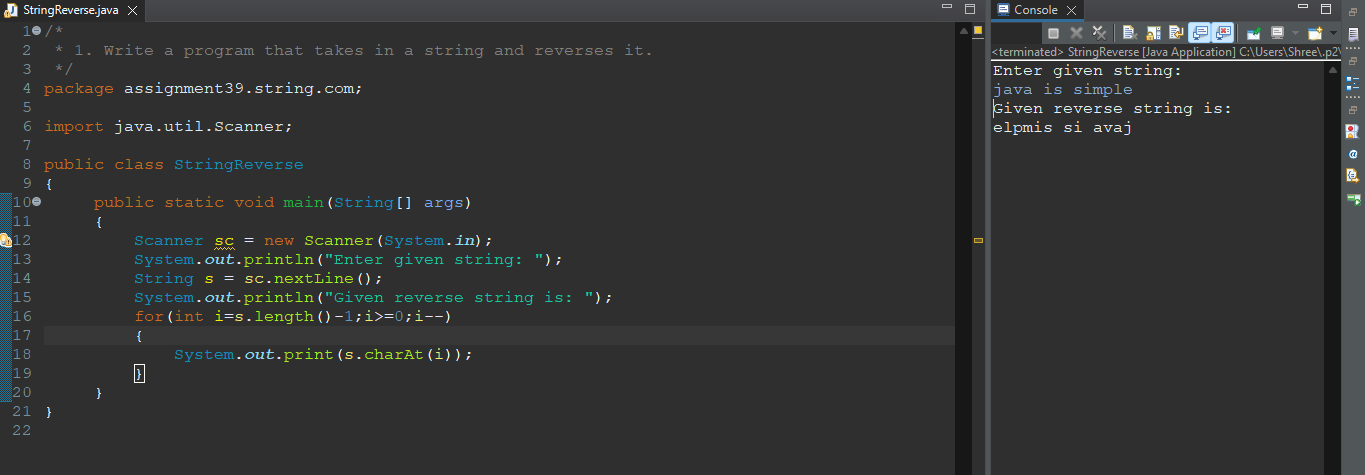
**Assignment No:-39**

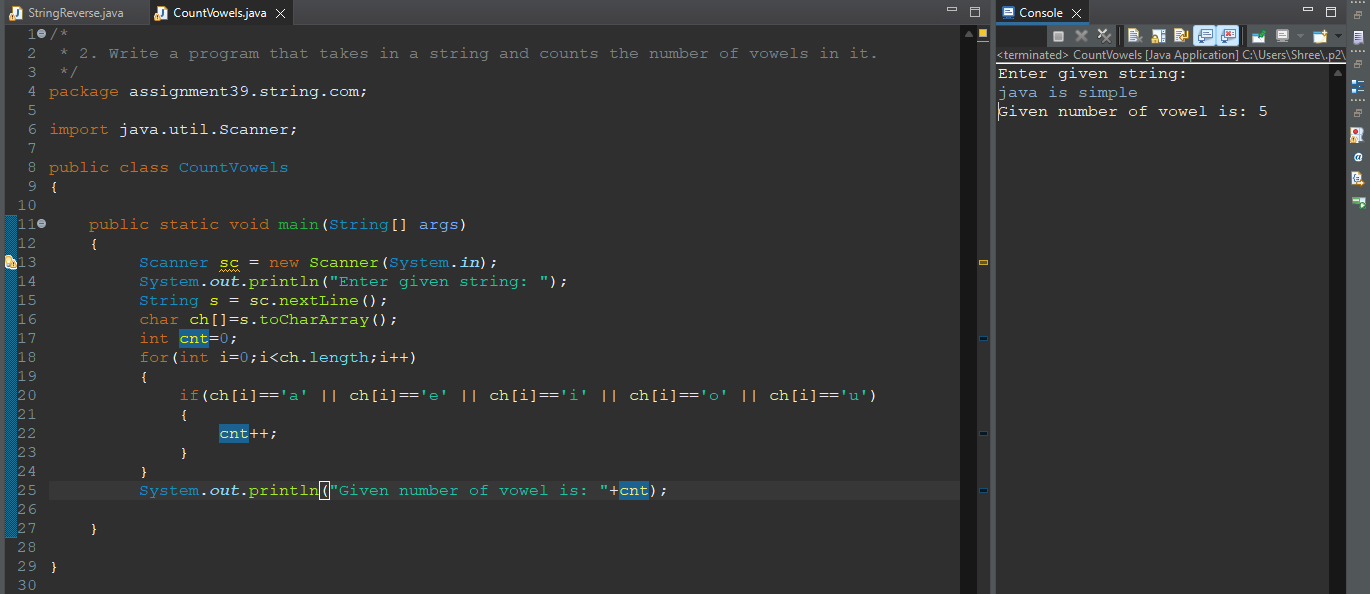
Name:-Suryawanshi Sangramsingh Sambhaji

Batch: - Delta - DCA (Java) 2024 Date:-1/7/2024

**1. Write a program that takes in a string and reverses it.**

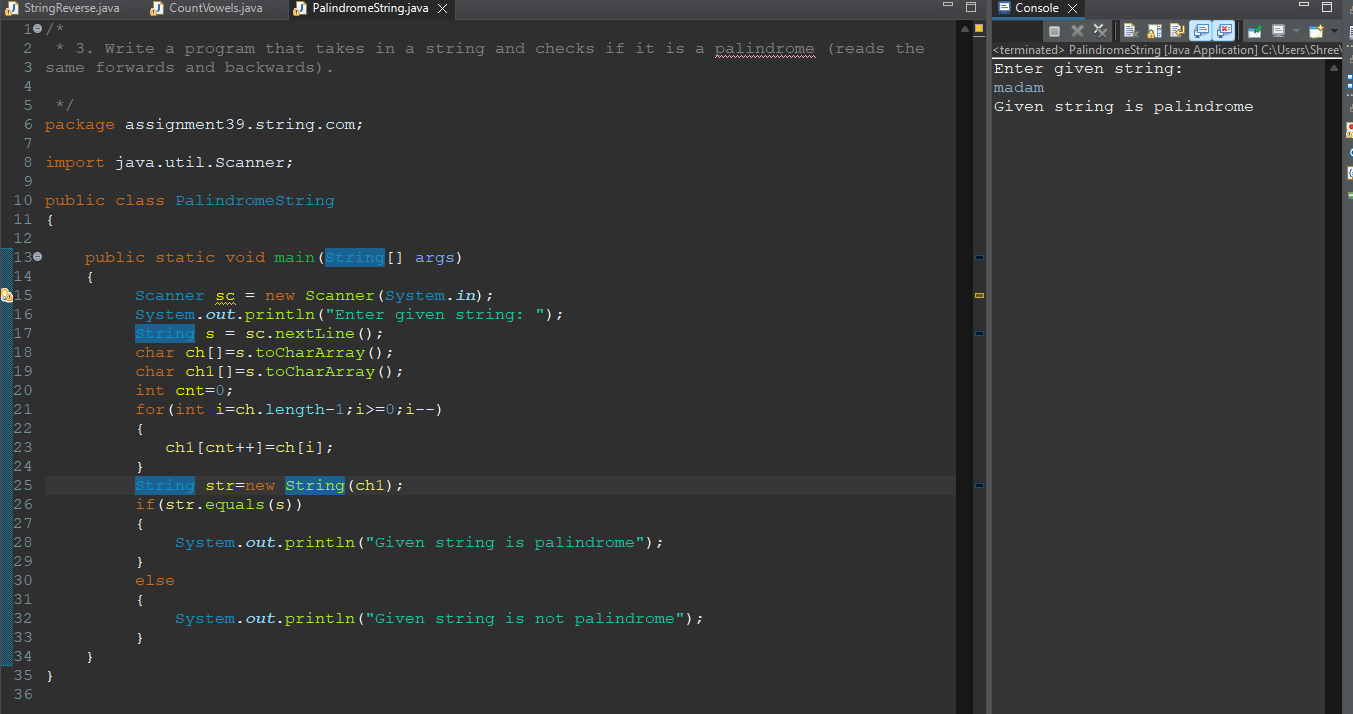
****

**2. Write a program that takes in a string and counts the number of vowels in it.**

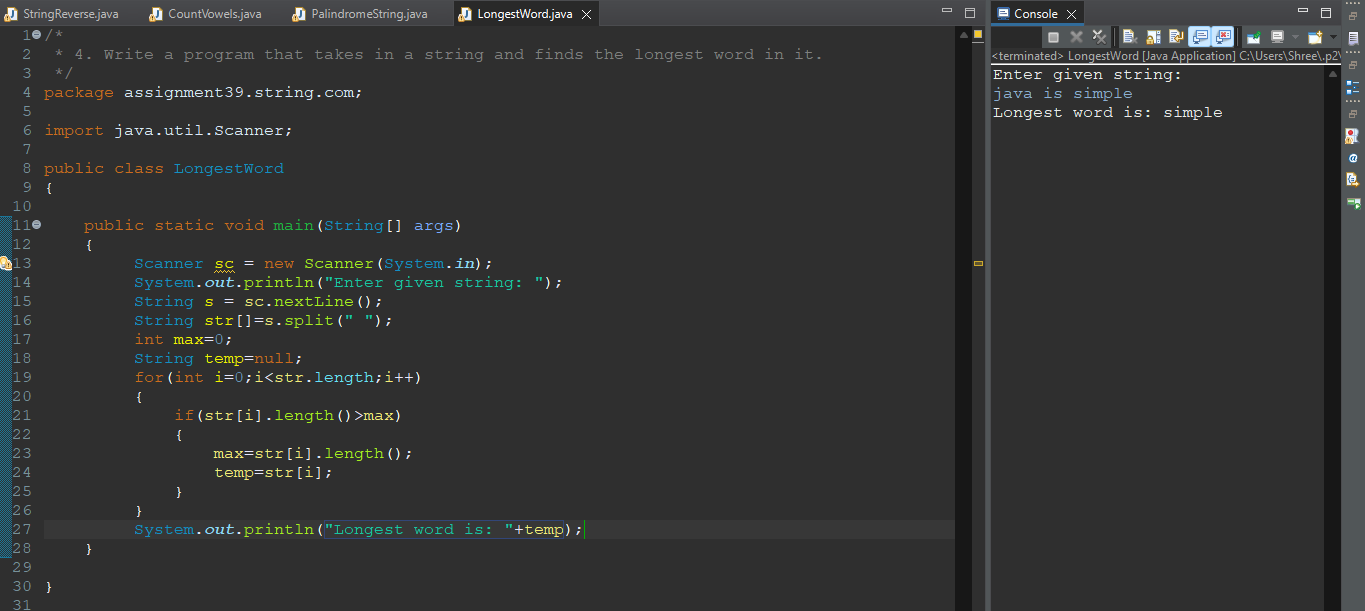
****

**3. Write a program that takes in a string and checks if it is a palindrome (reads the**

**same forwards and backwards).**

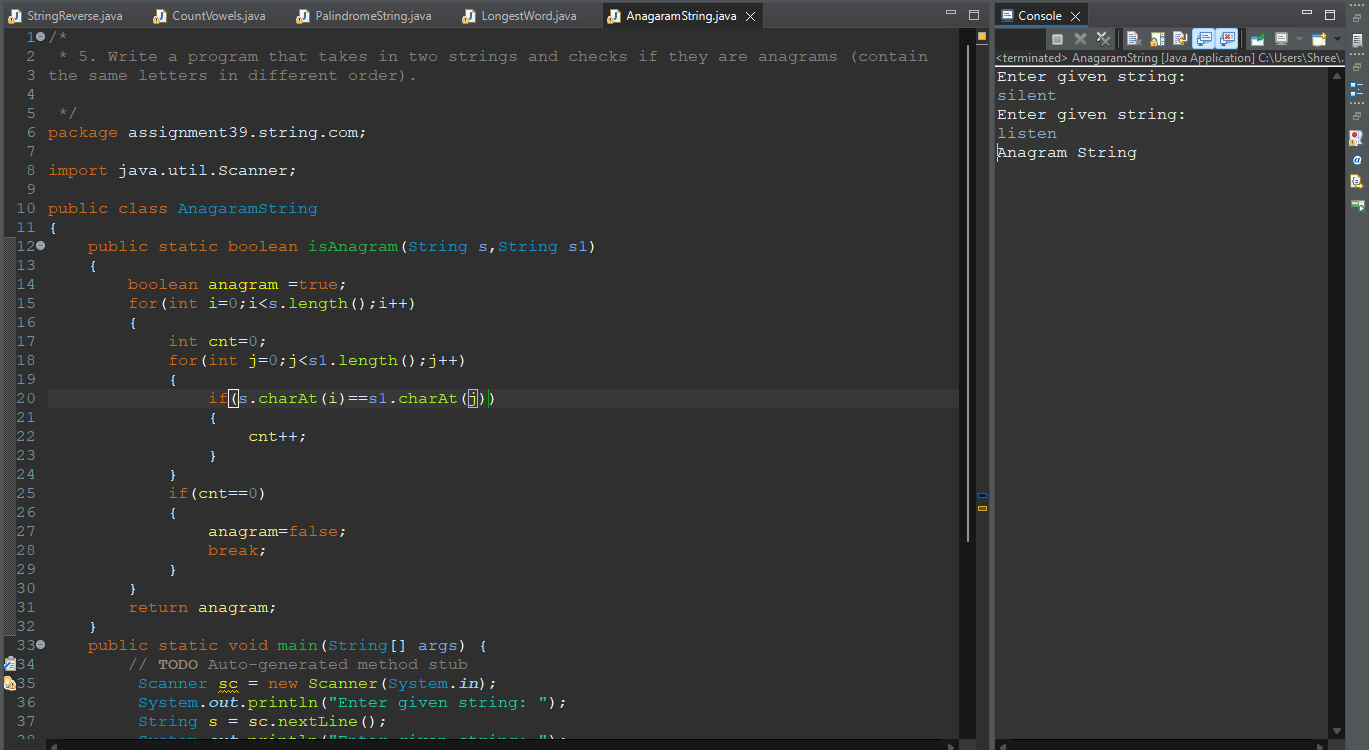
****

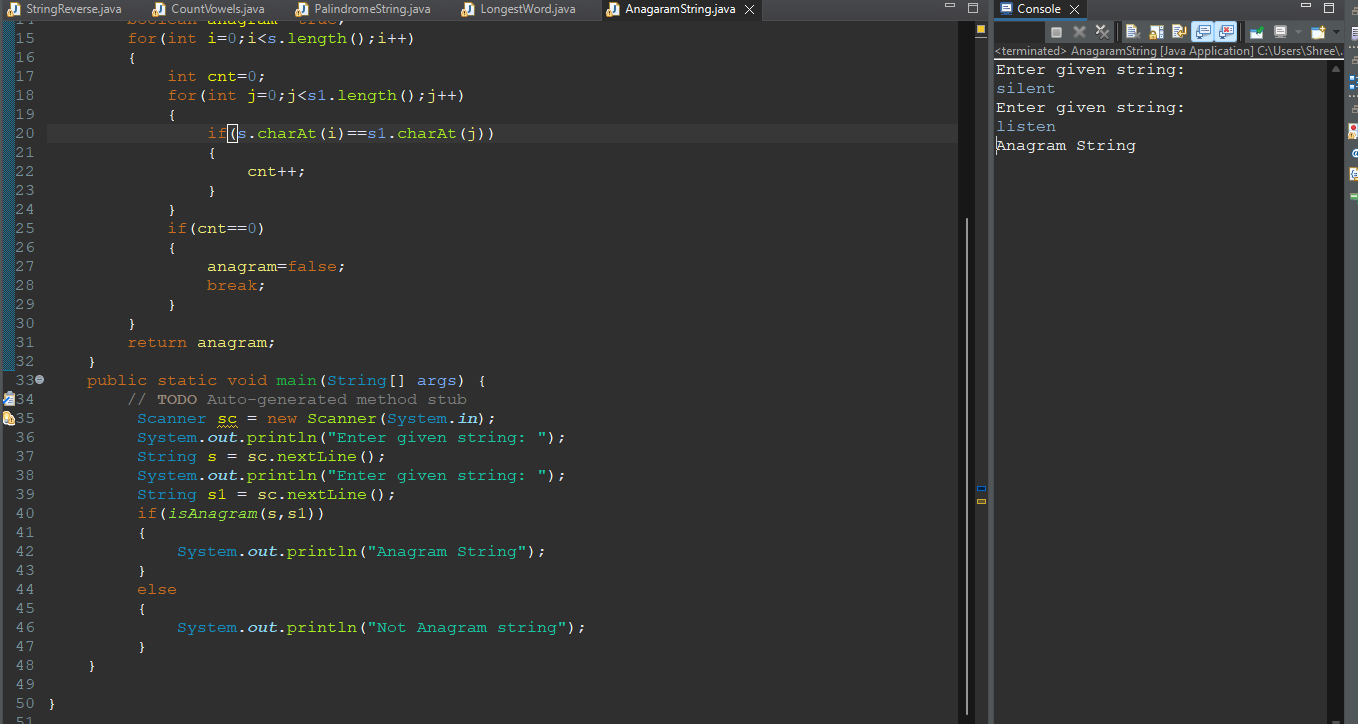
**4. Write a program that takes in a string and finds the longest word in it.**

****

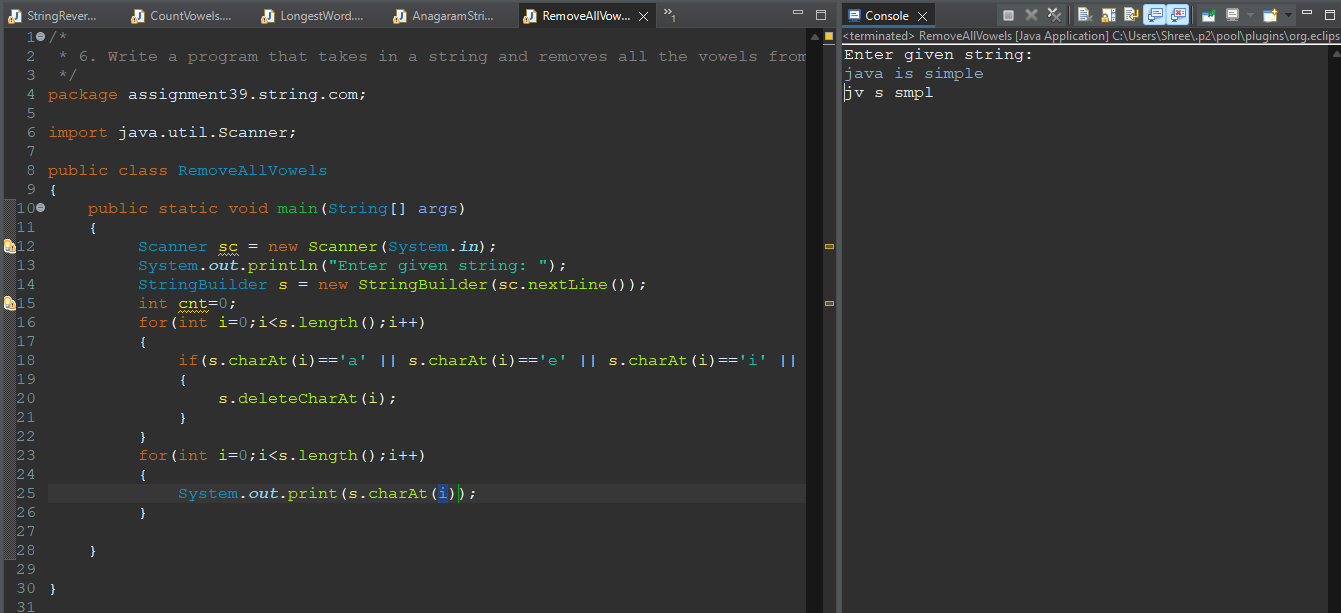
**5. Write a program that takes in two strings and checks if they are anagrams (contain**

**the same letters in different order).**

****

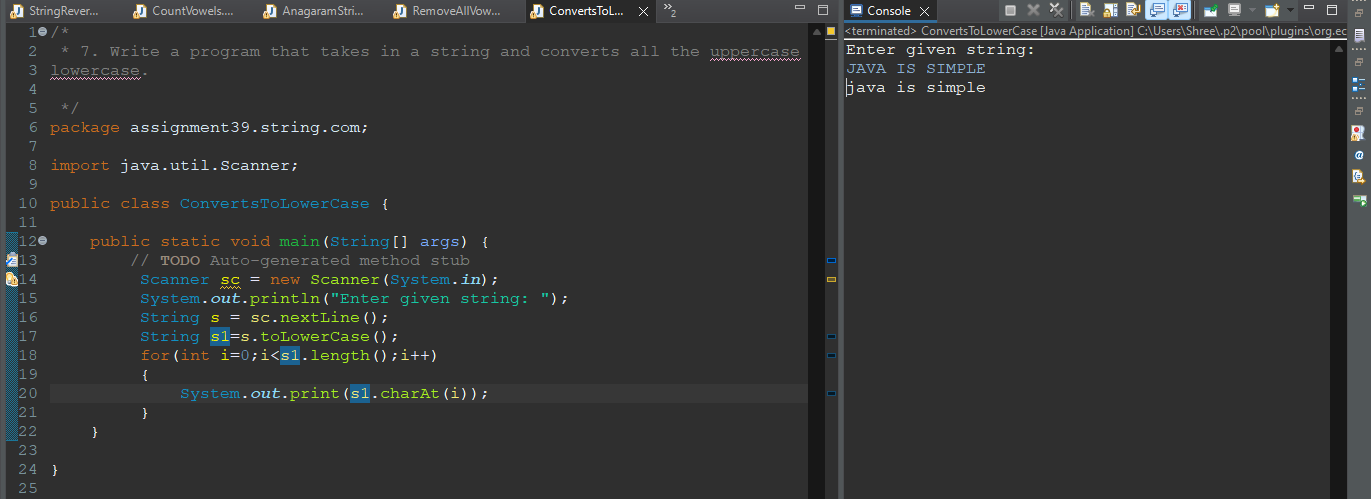
****

**6. Write a program that takes in a string and removes all the vowels from it.**

****

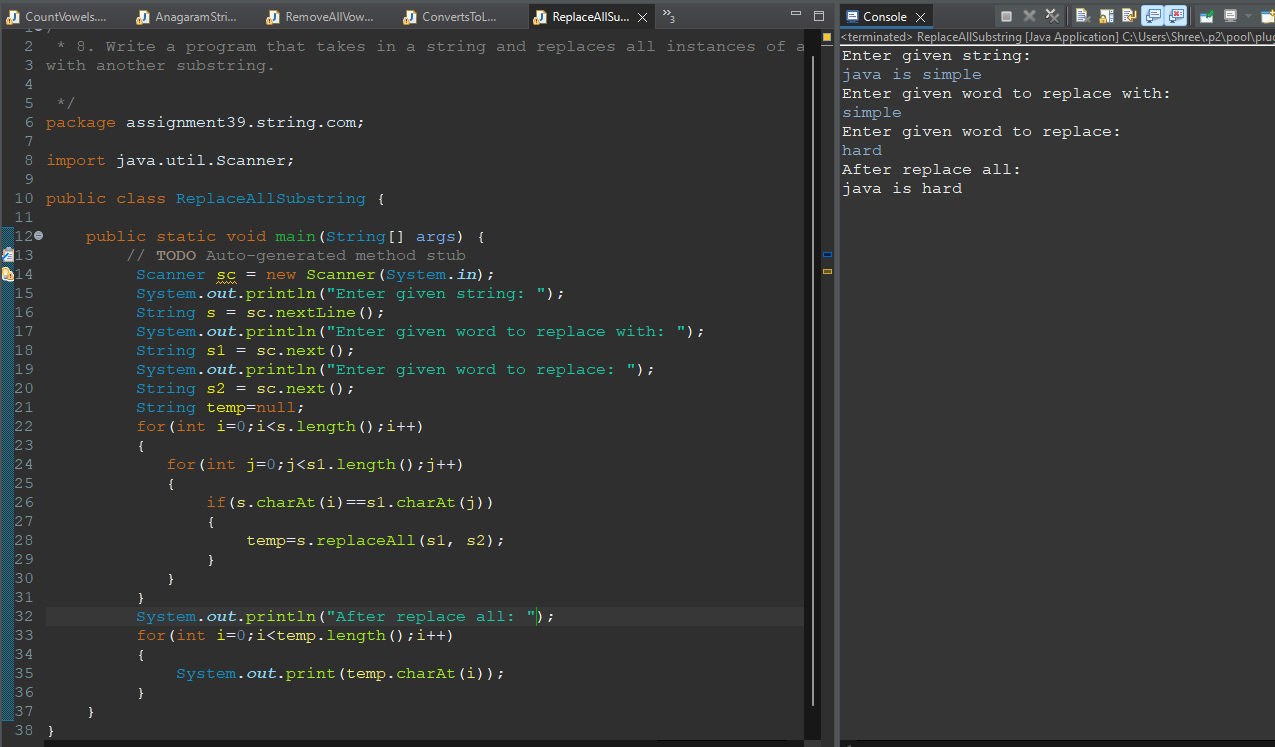
**7. Write a program that takes in a string and converts all the uppercase letters to**

**lowercase.**

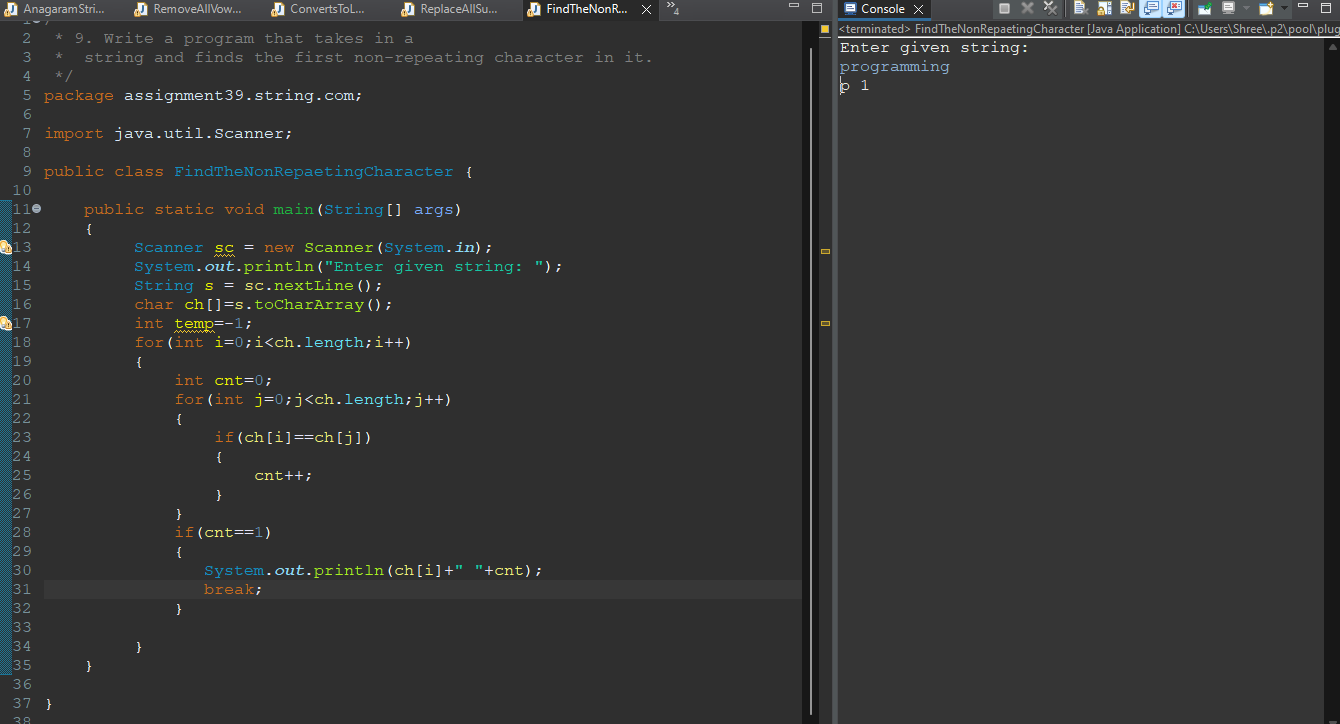
****

**8. Write a program that takes in a string and replaces all instances of a given substring**

**with another substring.**

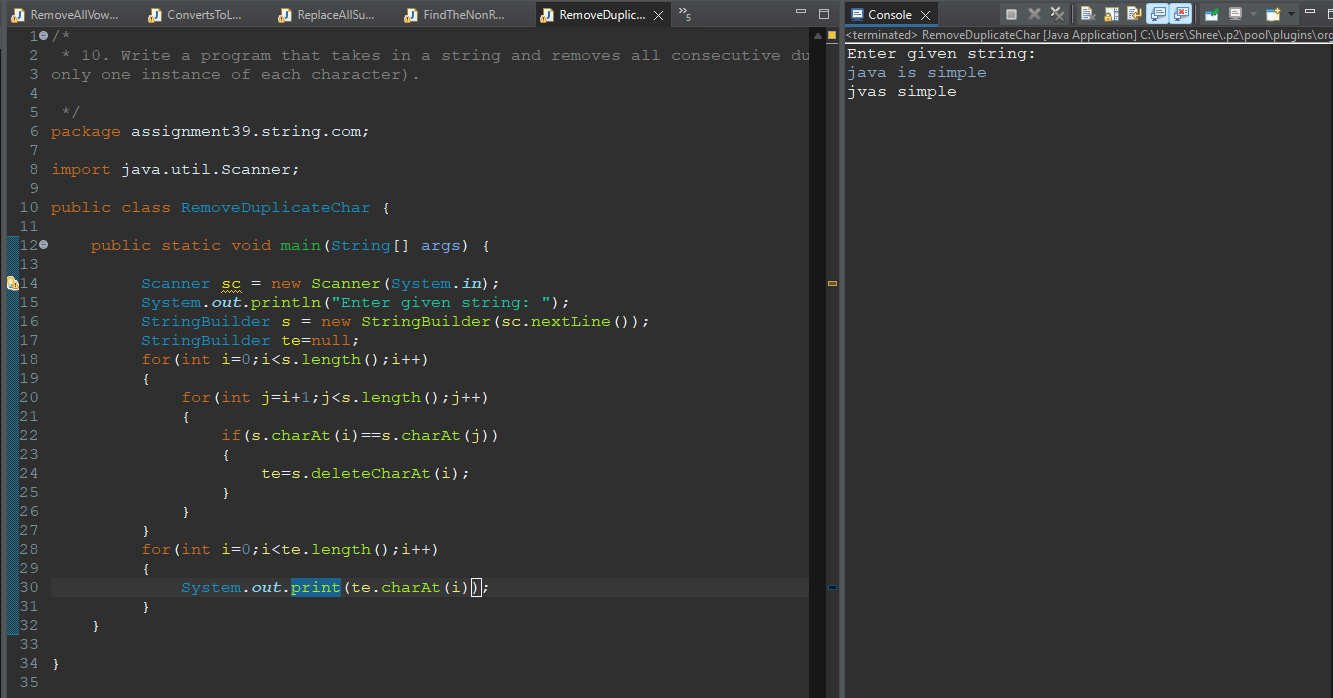
****

**9. Write a program that takes in a string and finds the first non-repeating character in it.**

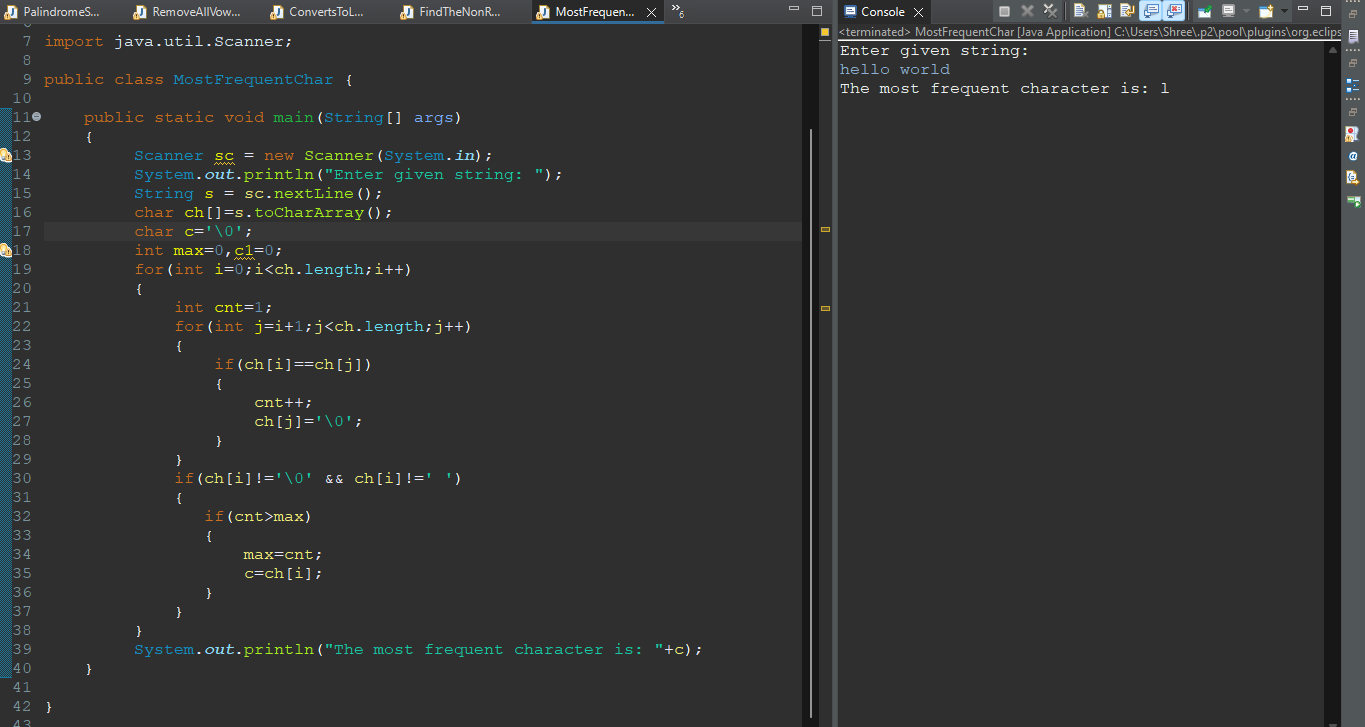
****

**10. Write a program that takes in a string and removes all consecutive duplicates (leaves**

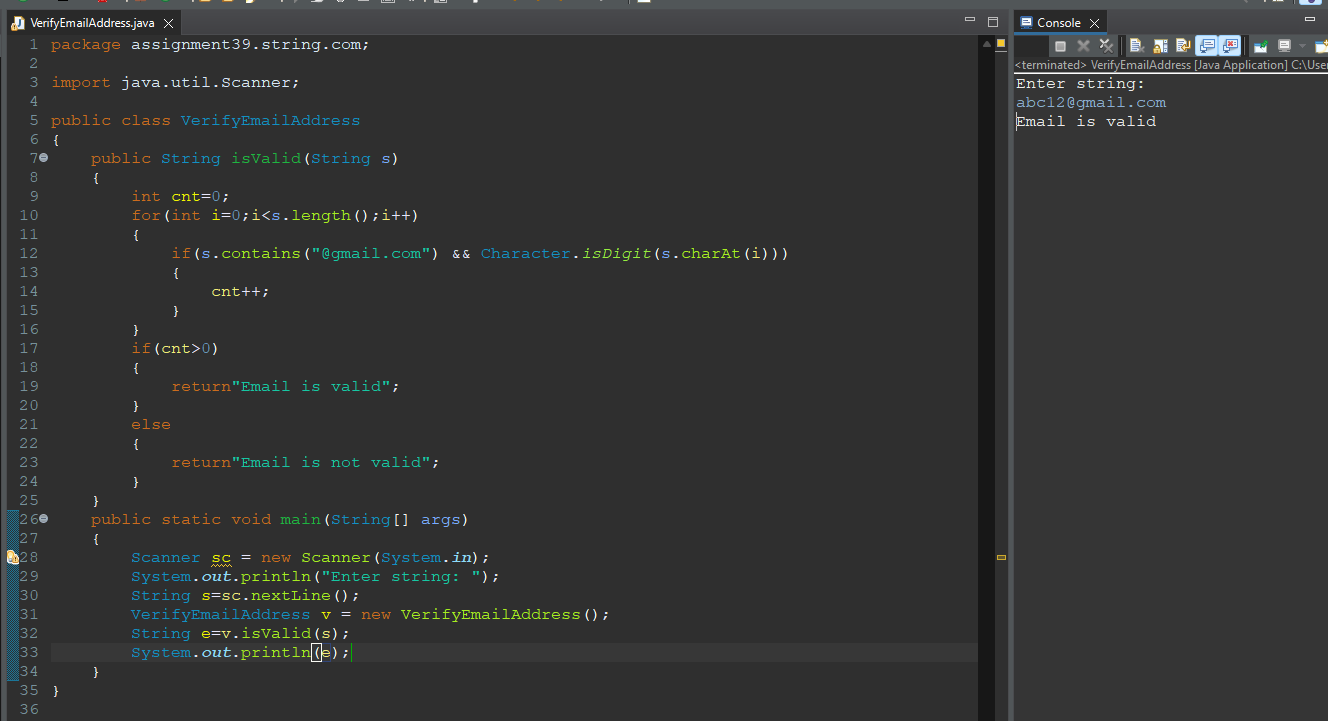
**only one instance of each character).**

****

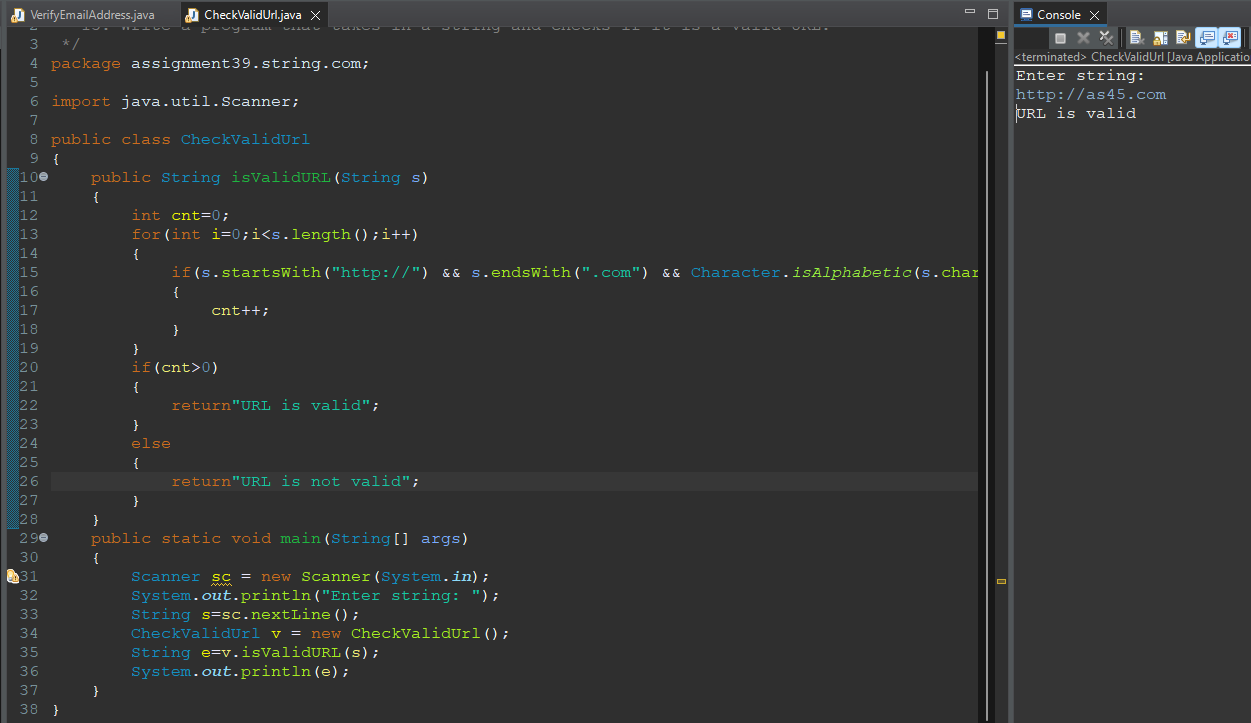
**11. Write a program that takes in a string and finds the most frequent character in it.**

****

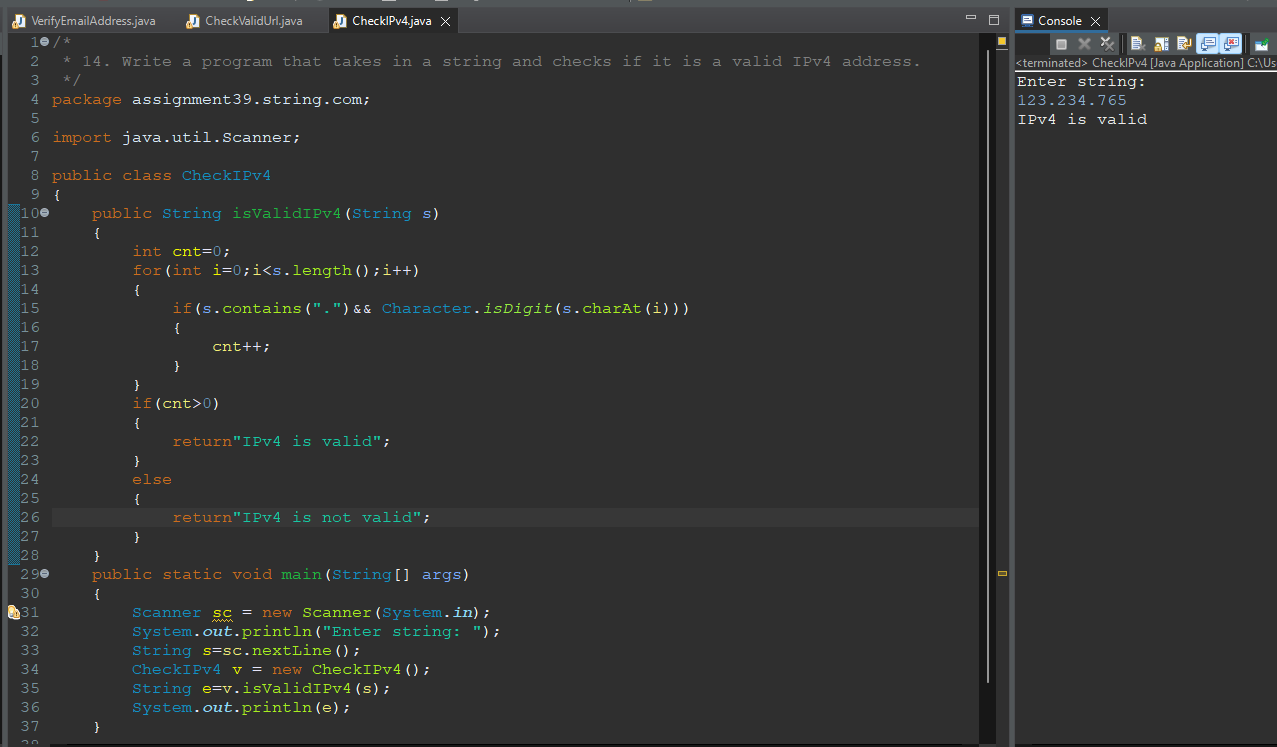
**12. Write a program that takes in a string and checks if it is a valid email address.**

****

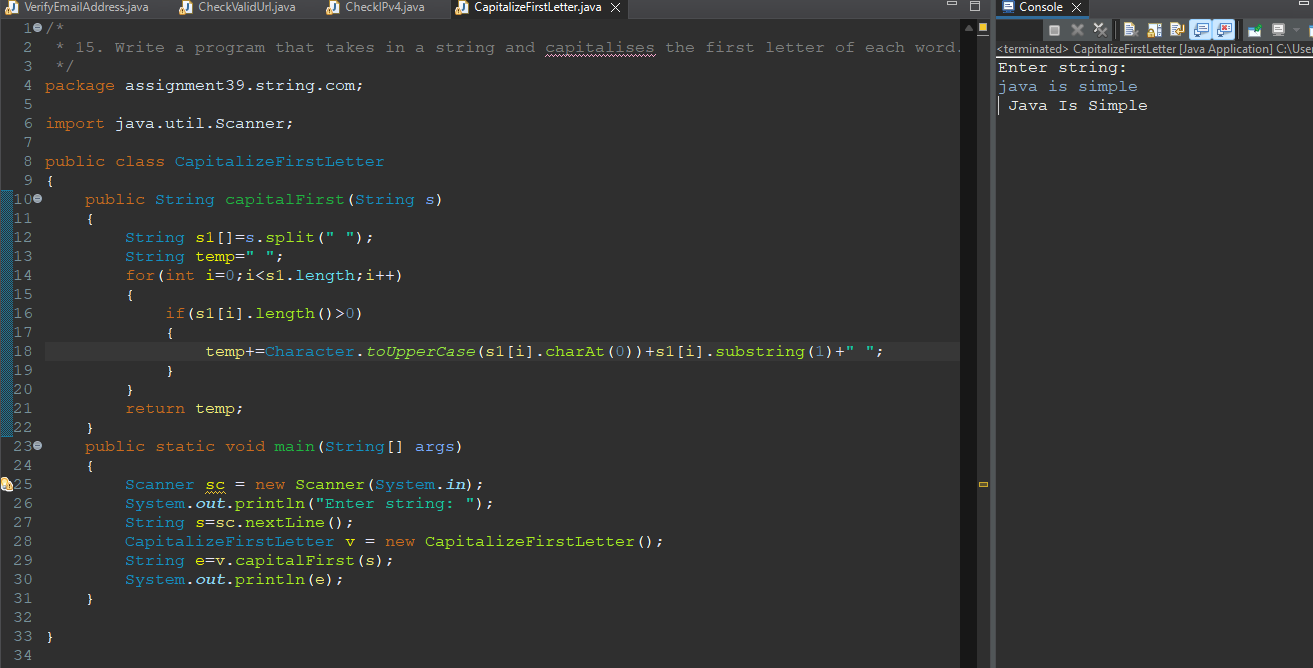
**13. Write a program that takes in a string and checks if it is a valid URL.**

****

**14. Write a program that takes in a string and checks if it is a valid IPv4 address.**

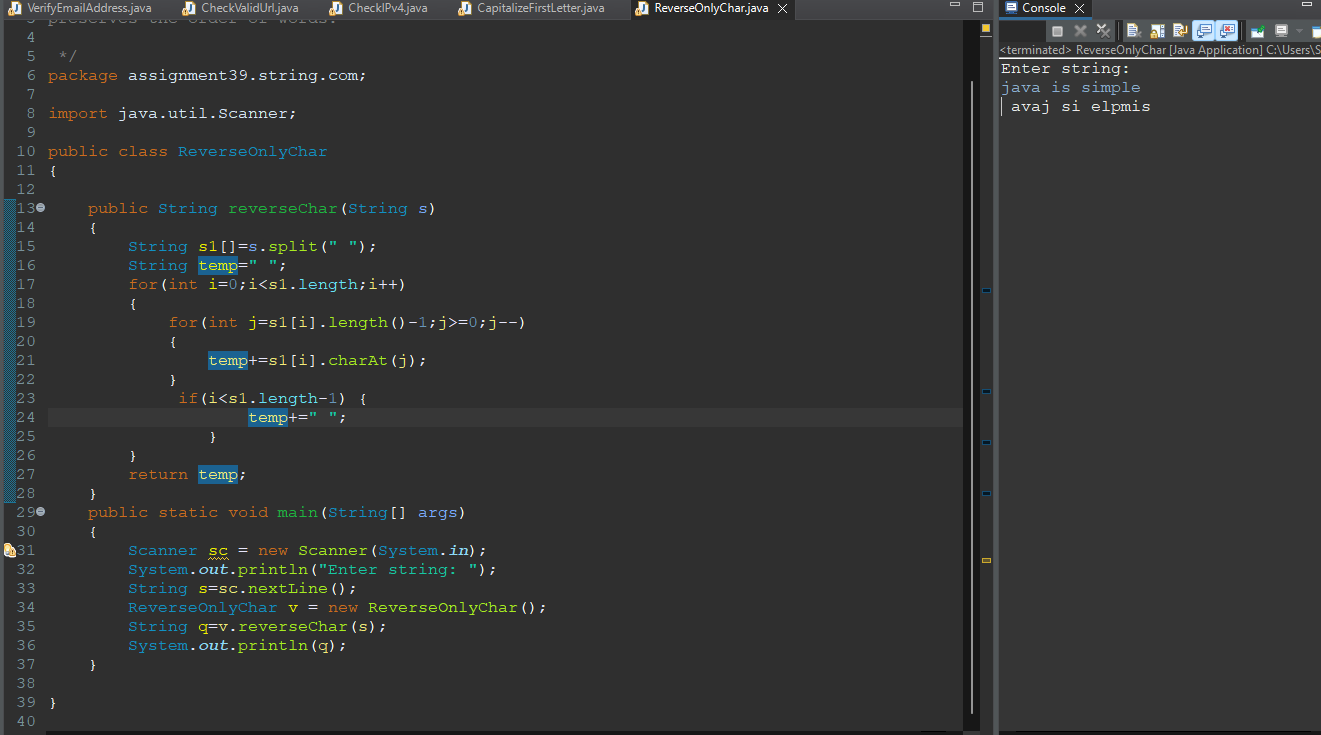
****

**15. Write a program that takes in a string and capitalises the first letter of each word.**

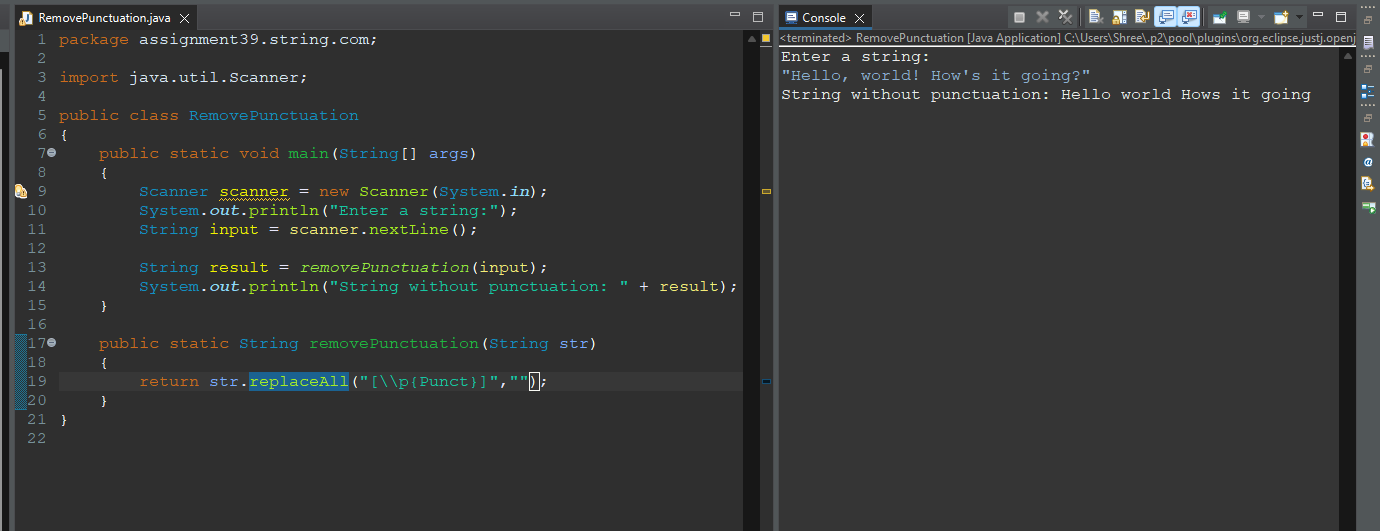
****

**16. Write a program that takes in a string and returns the characters in reverse order, but**

**preserves the order of words.**

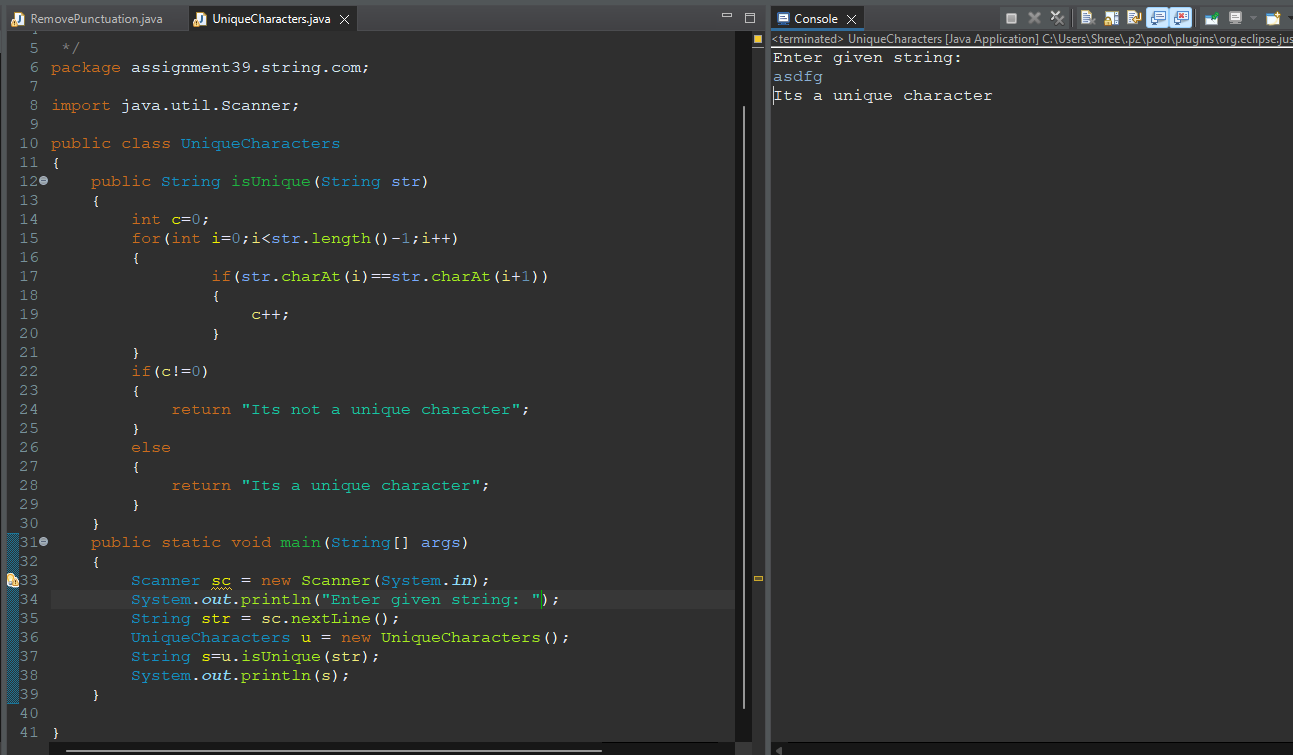
****

**17. Write a program that takes in a string and removes all punctuation marks from it.**

****

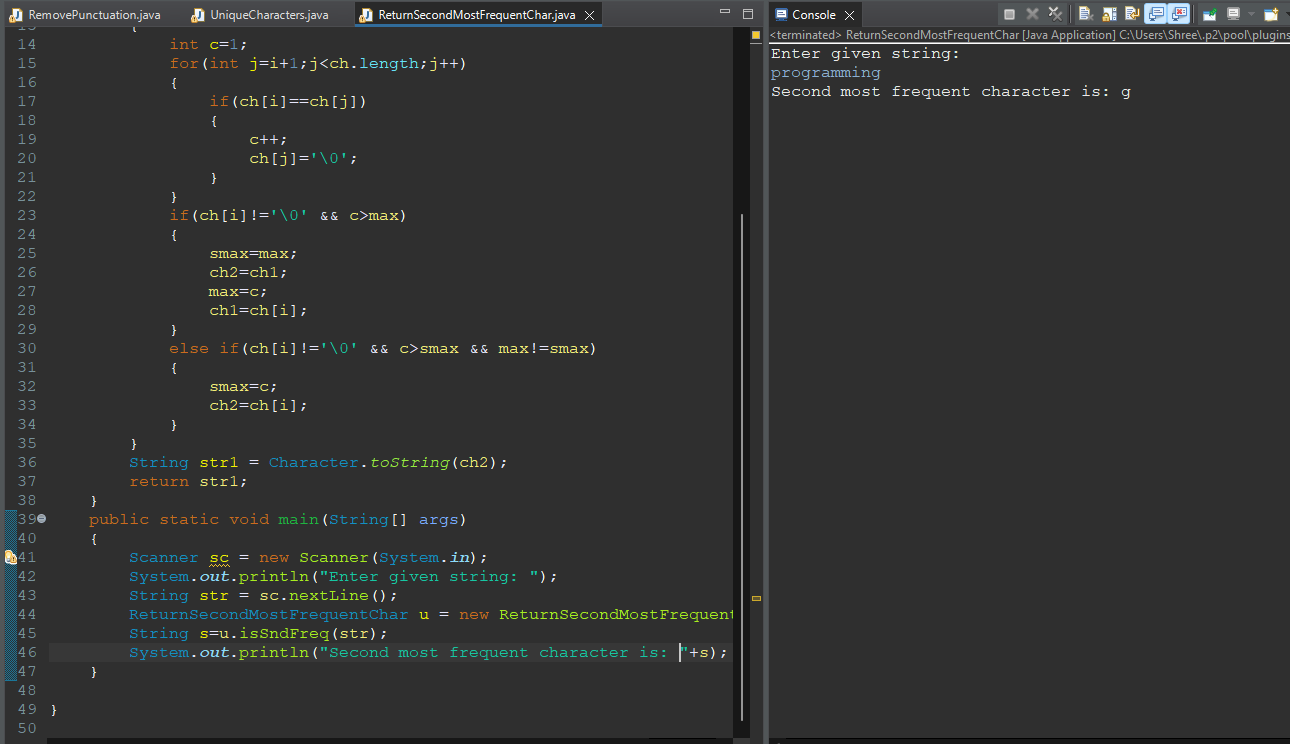
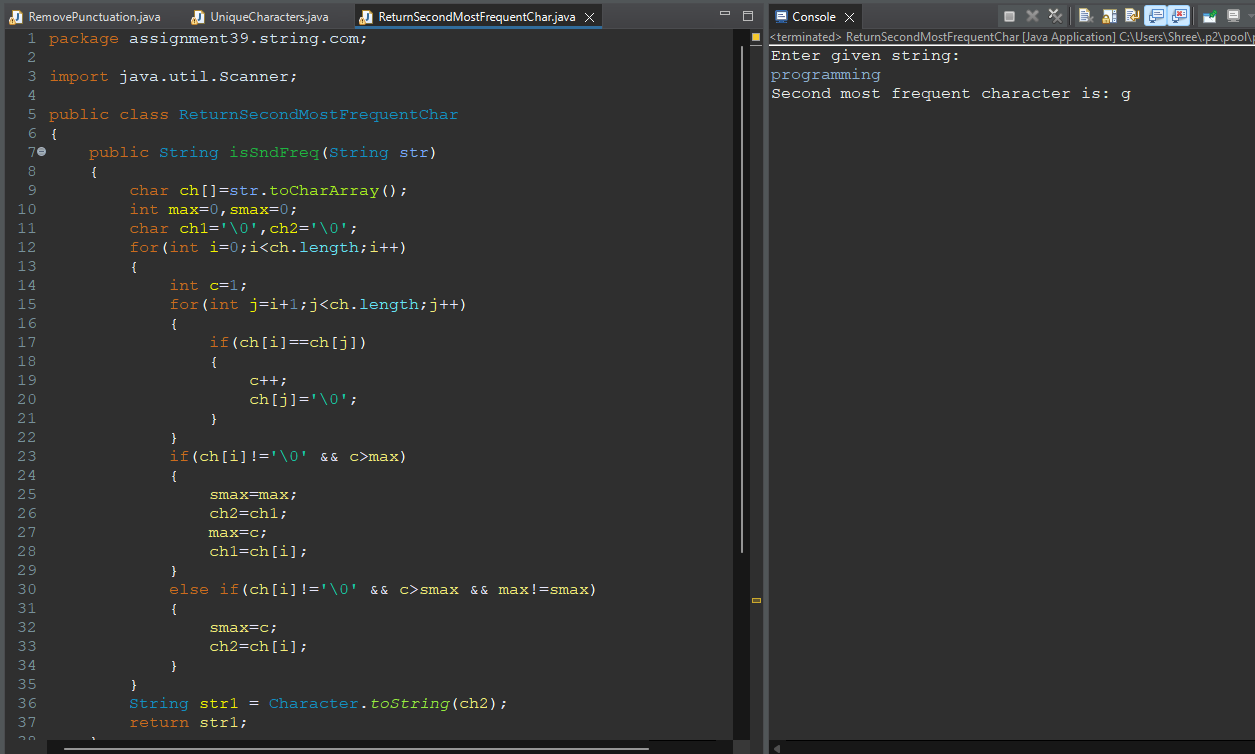
**18. Write a program that takes in a string and checks if it contains only unique**

**characters.**

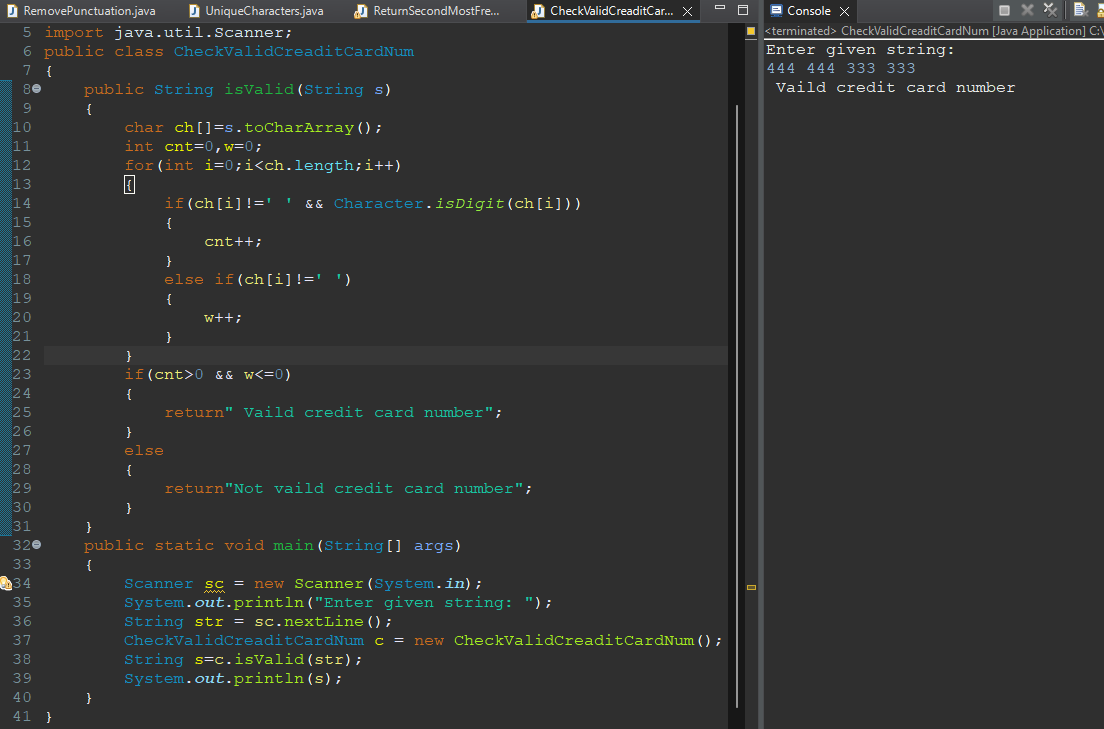
****

**19. Write a program that takes in a string and returns the second most frequent character**

**in it.**

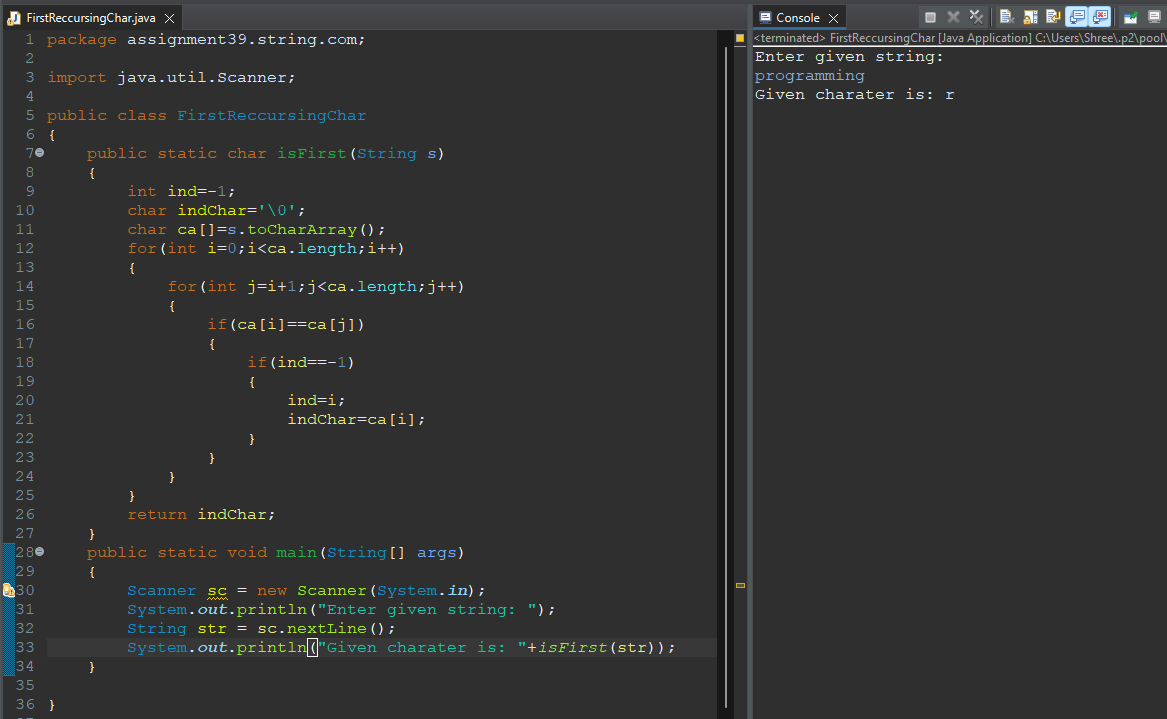
****

**20. Write a program that takes in a string and checks if it is a valid credit card number**

****

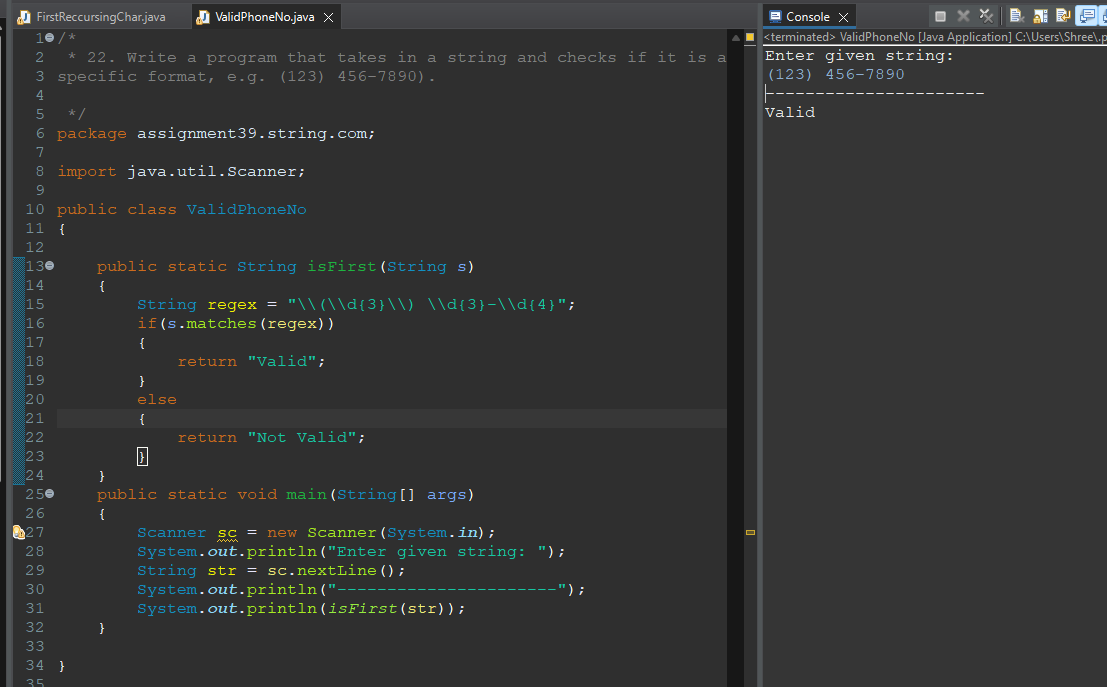
**21. Write a program that takes in a string and returns the first recurring character (i.e. the**

**first character that appears more than once).**

****

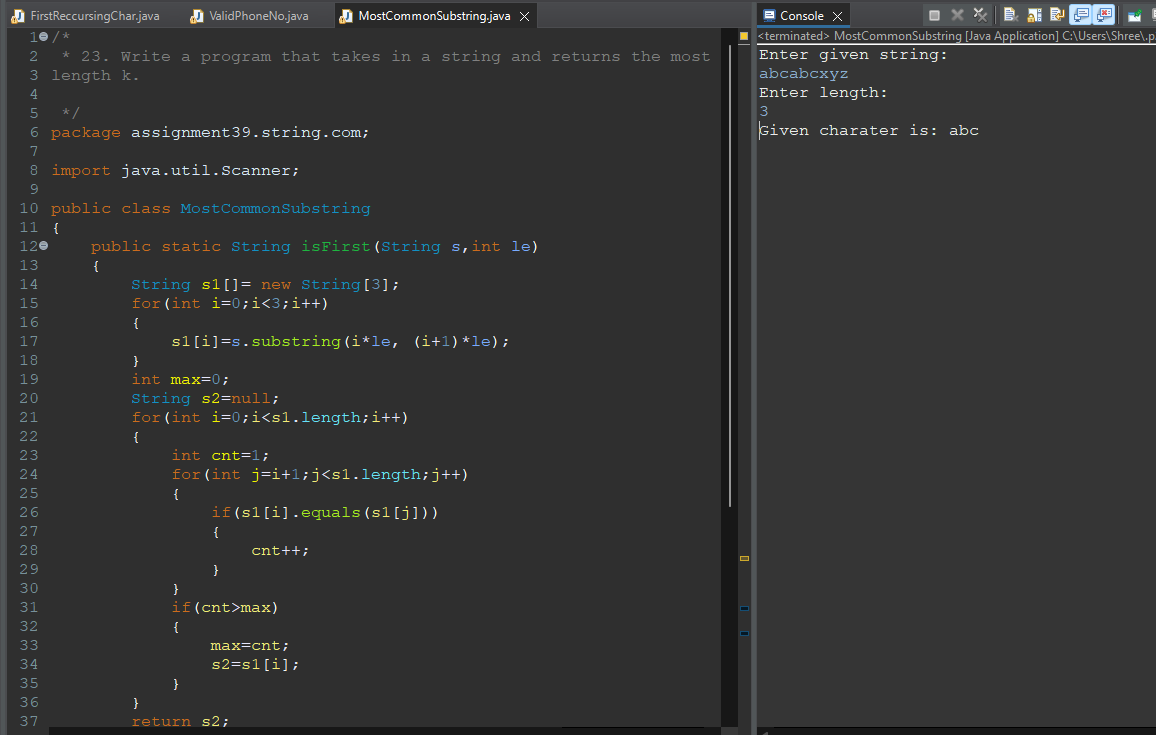
**22. Write a program that takes in a string and checks if it is a valid phone number (in a**

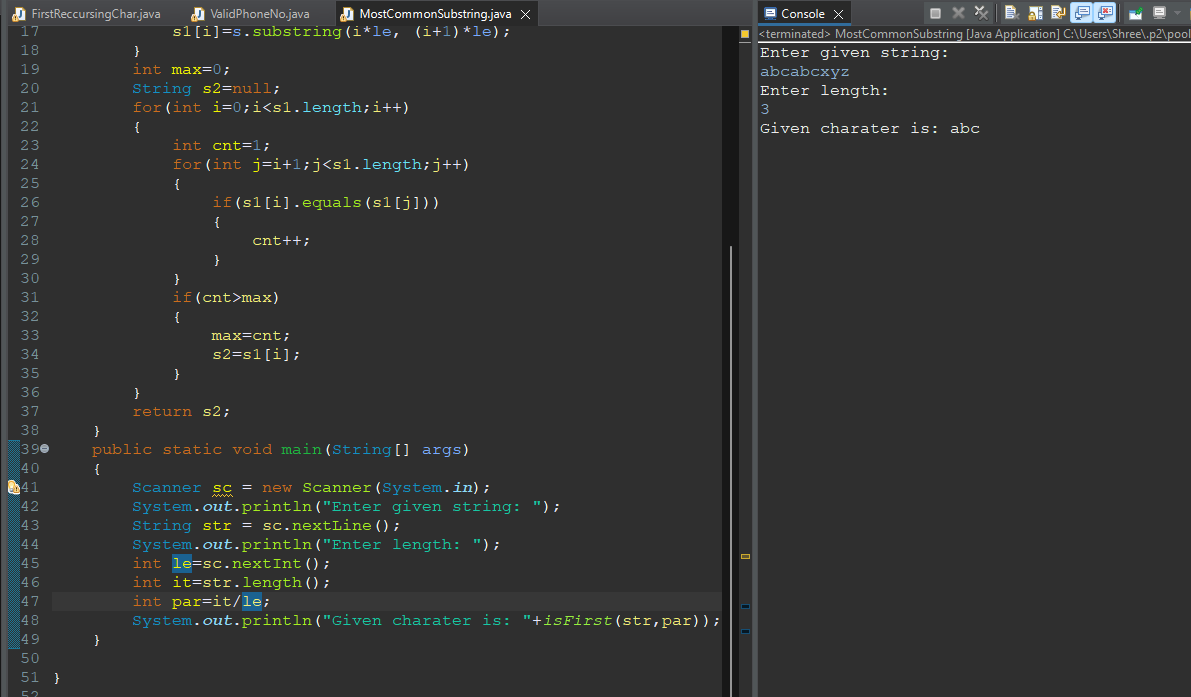
**specific format, e.g. (123) 456-7890).**

****

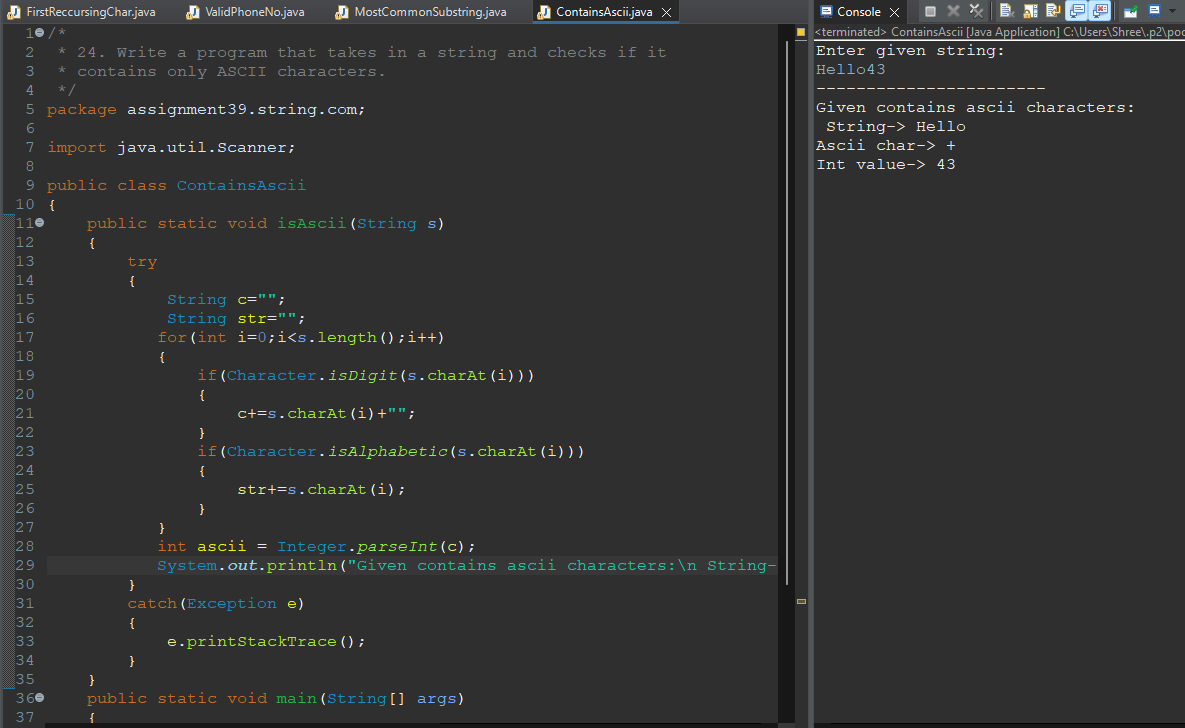
**23. Write a program that takes in a string and returns the most common substring of**

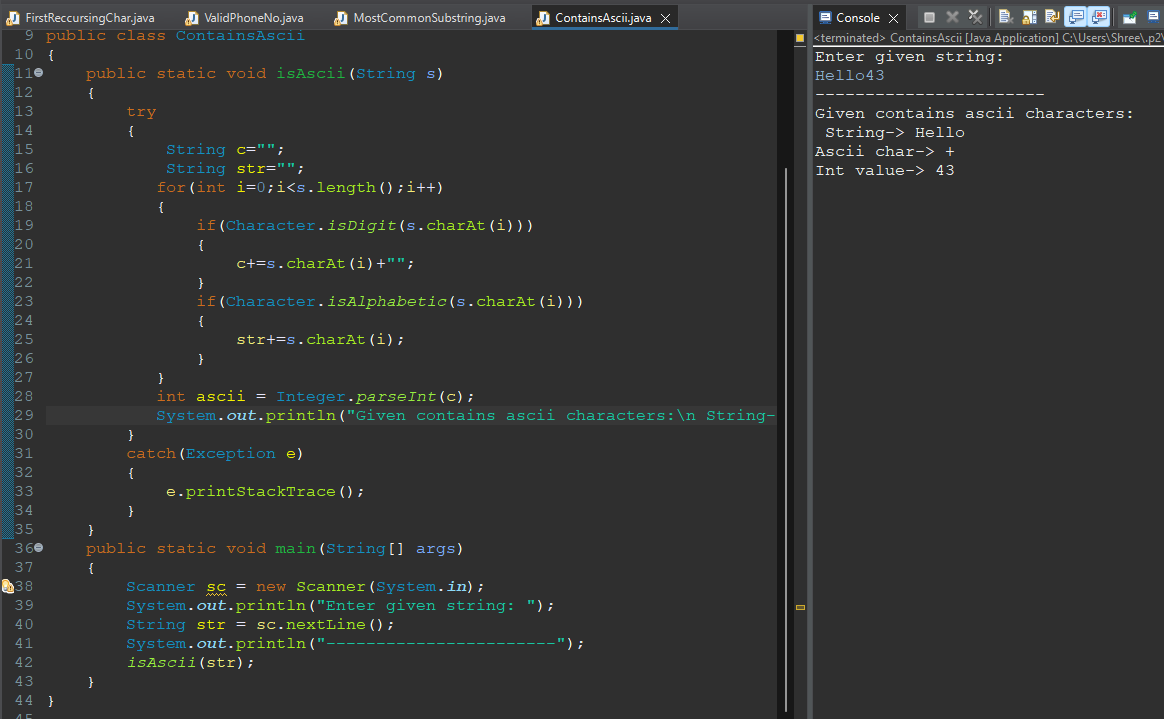
**length k.**

****

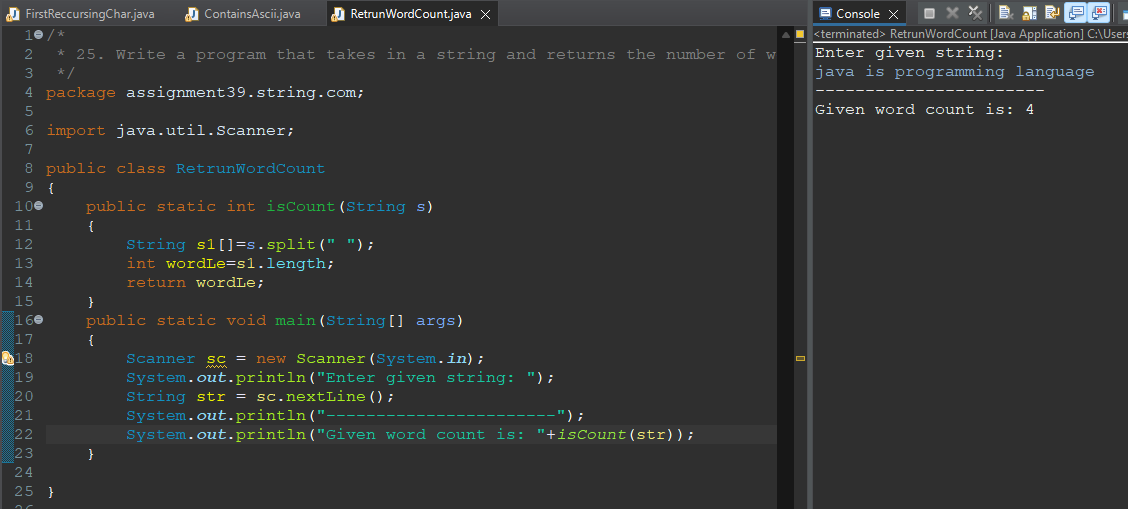
****

**24. Write a program that takes in a string and checks if it contains only ASCII characters.**

****

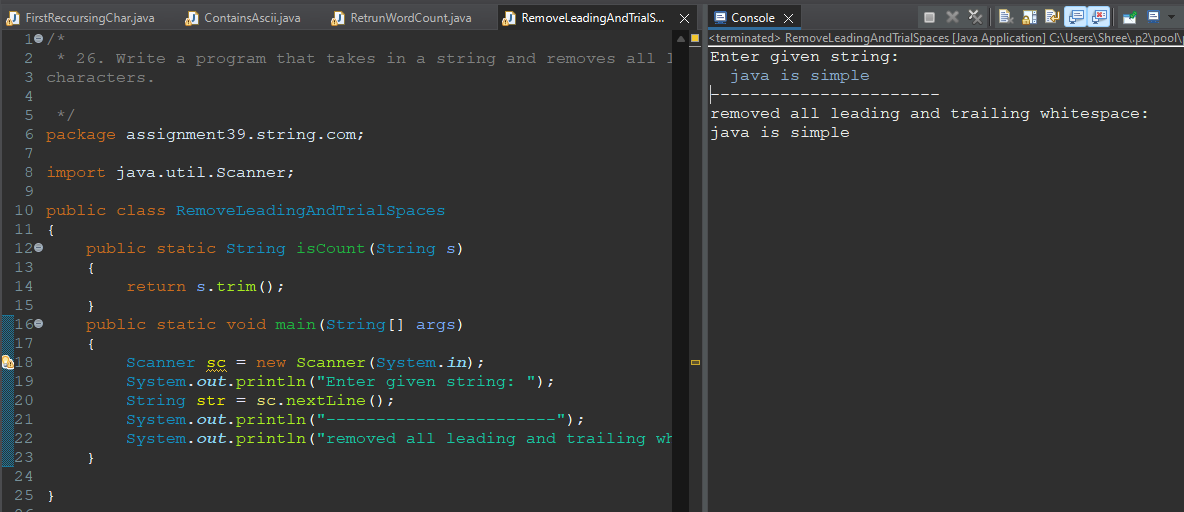
****

**25. Write a program that takes in a string and returns the number of words in it.**

****

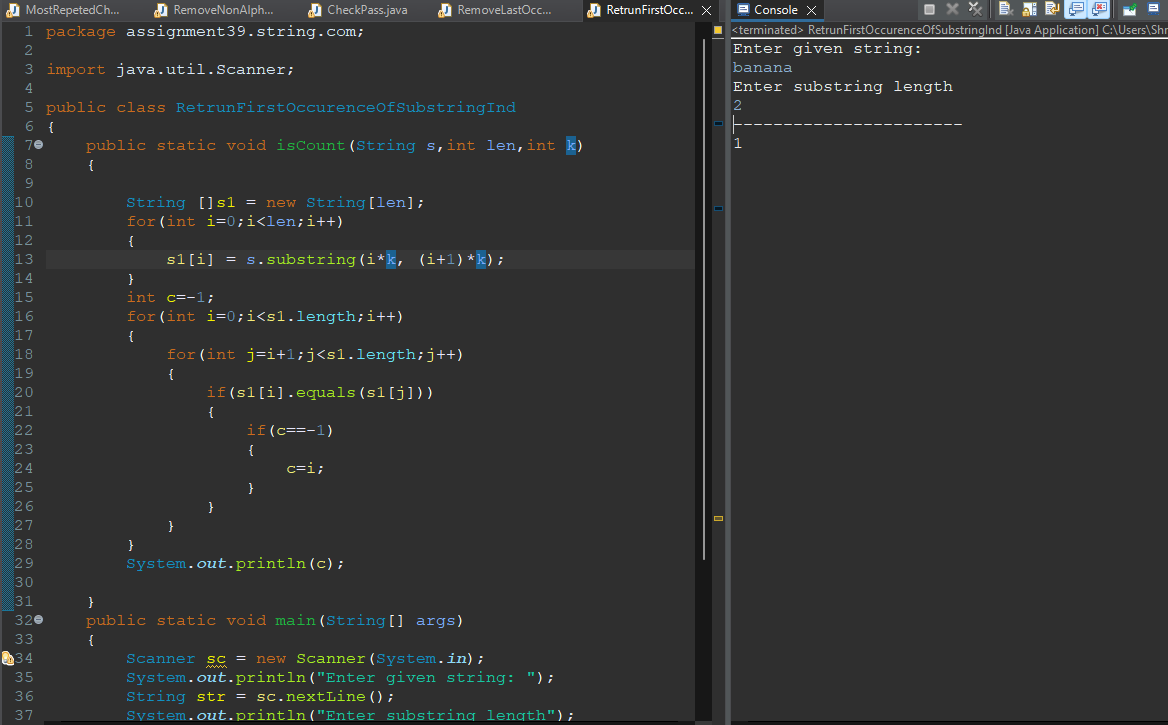
**26. Write a program that takes in a string and removes all leading and trailing whitespace**

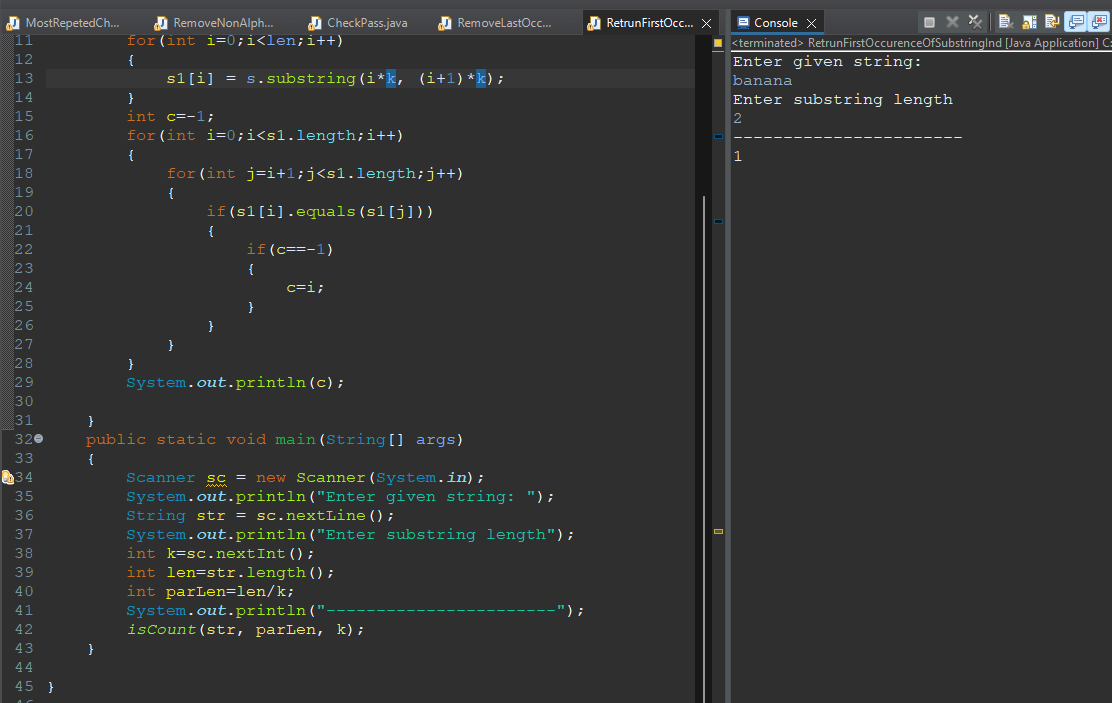
**characters.**

****

**27. Write a program that takes in a string and returns the index of the first occurrence of**

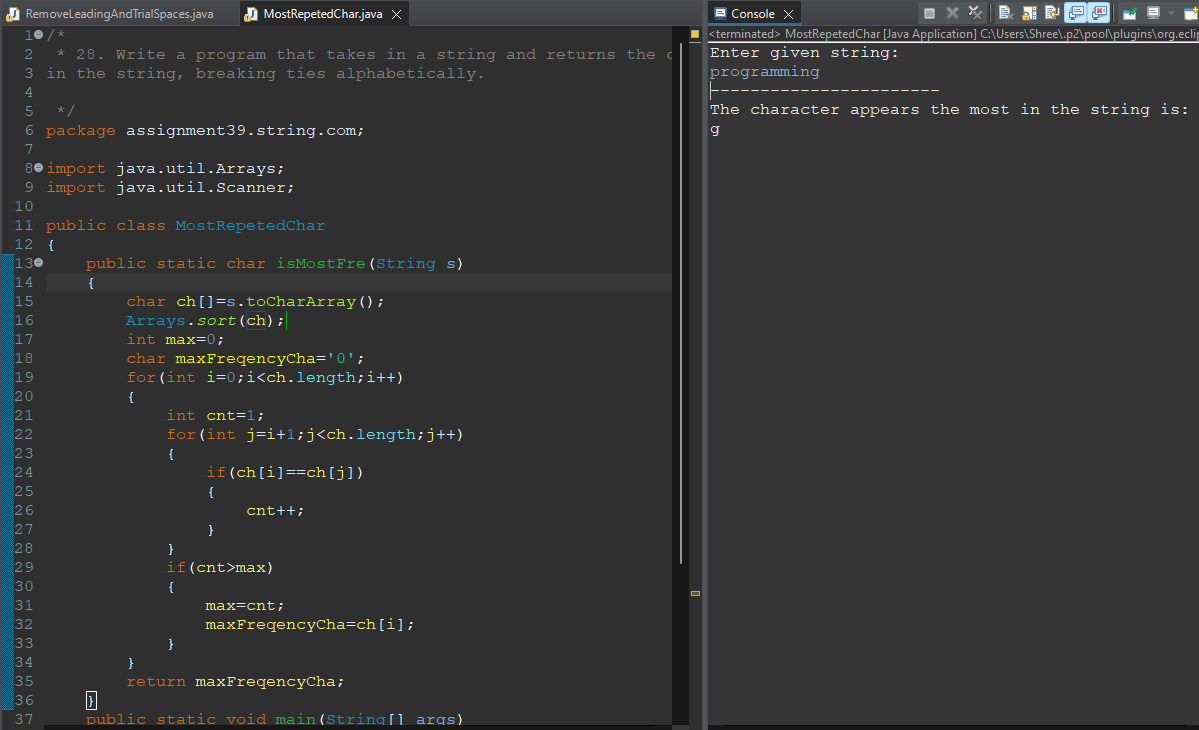
**a given substring.**

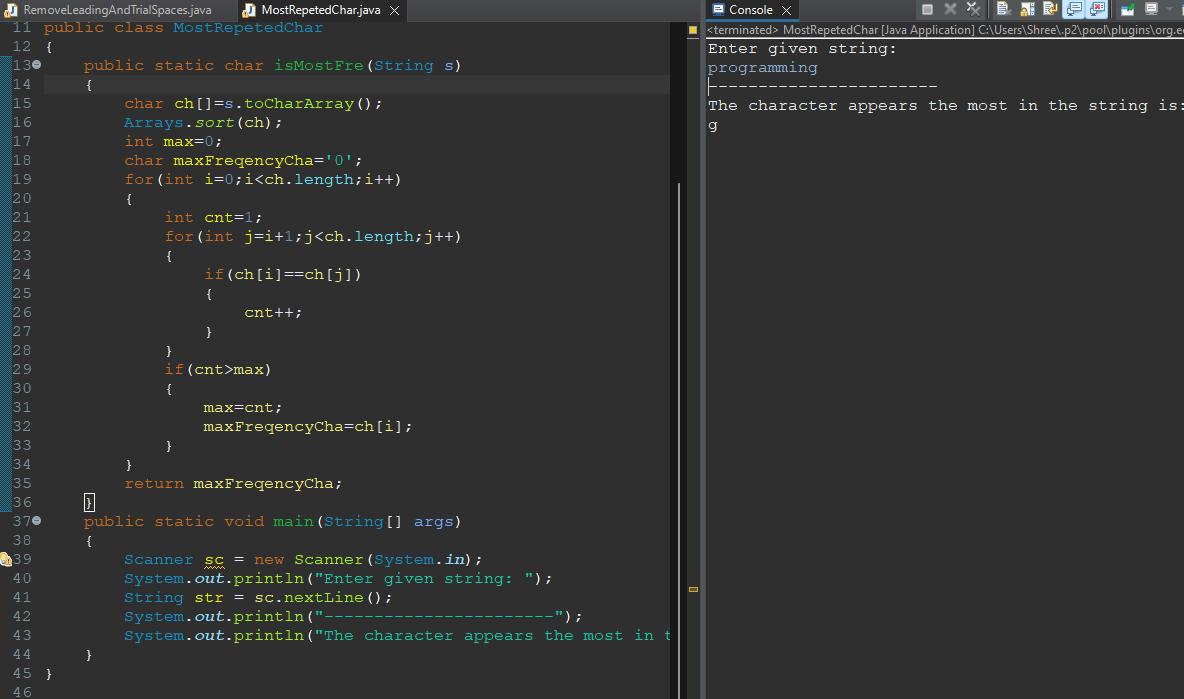
****

****

**28. Write a program that takes in a string and returns the character that appears the most**

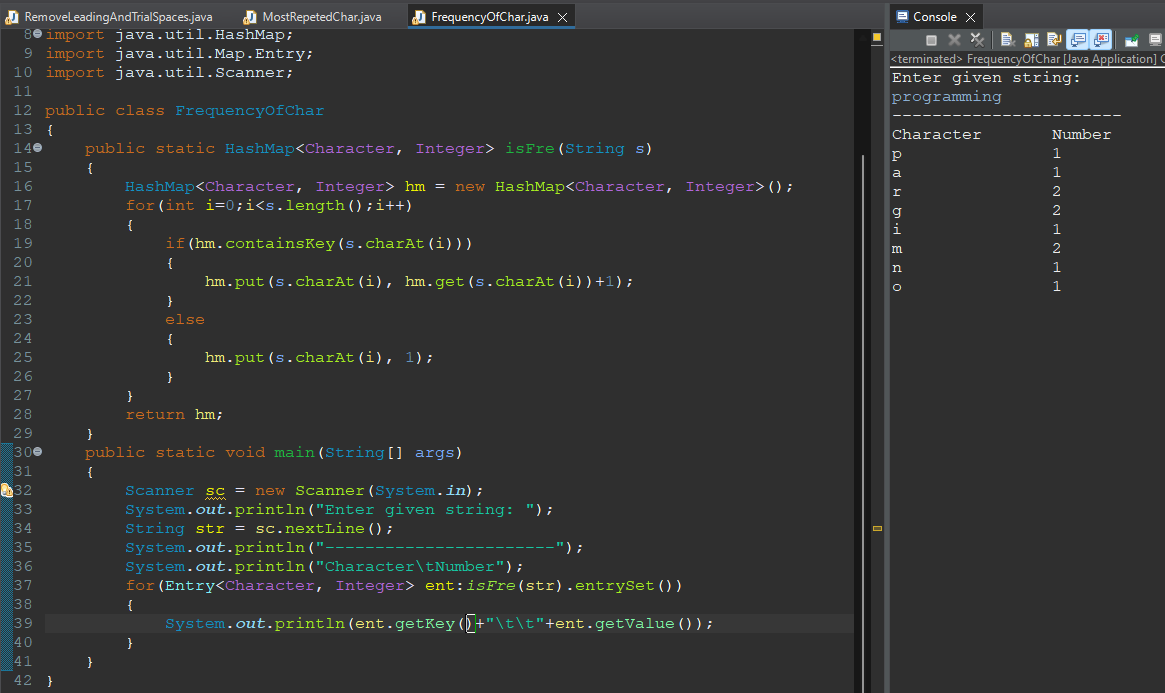
**in the string, breaking ties alphabetically.**

****

****

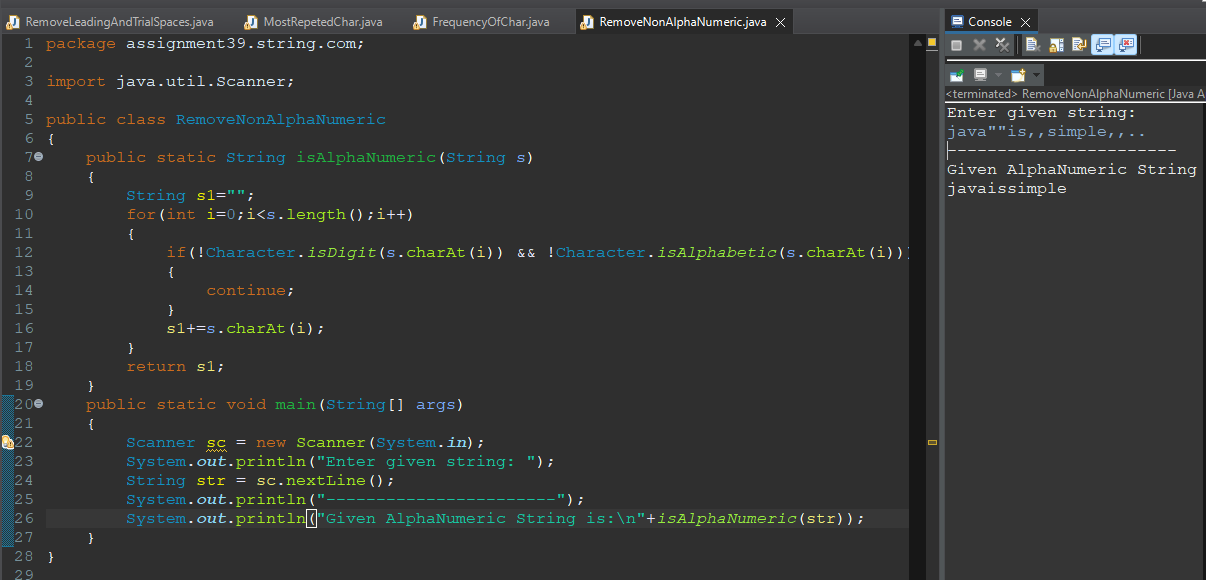
**29. Write a program that takes in a string and returns the number of times each character**

**appears in it.**

****

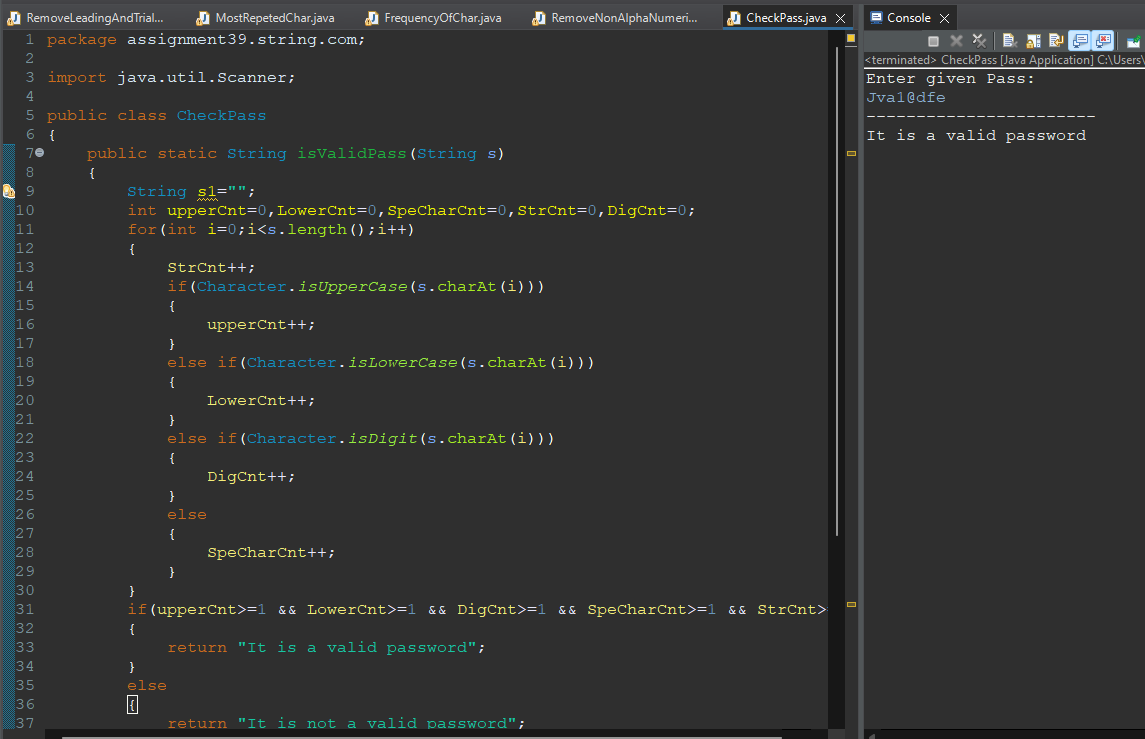
**30. Write a program that takes in a string and removes all characters that are not**

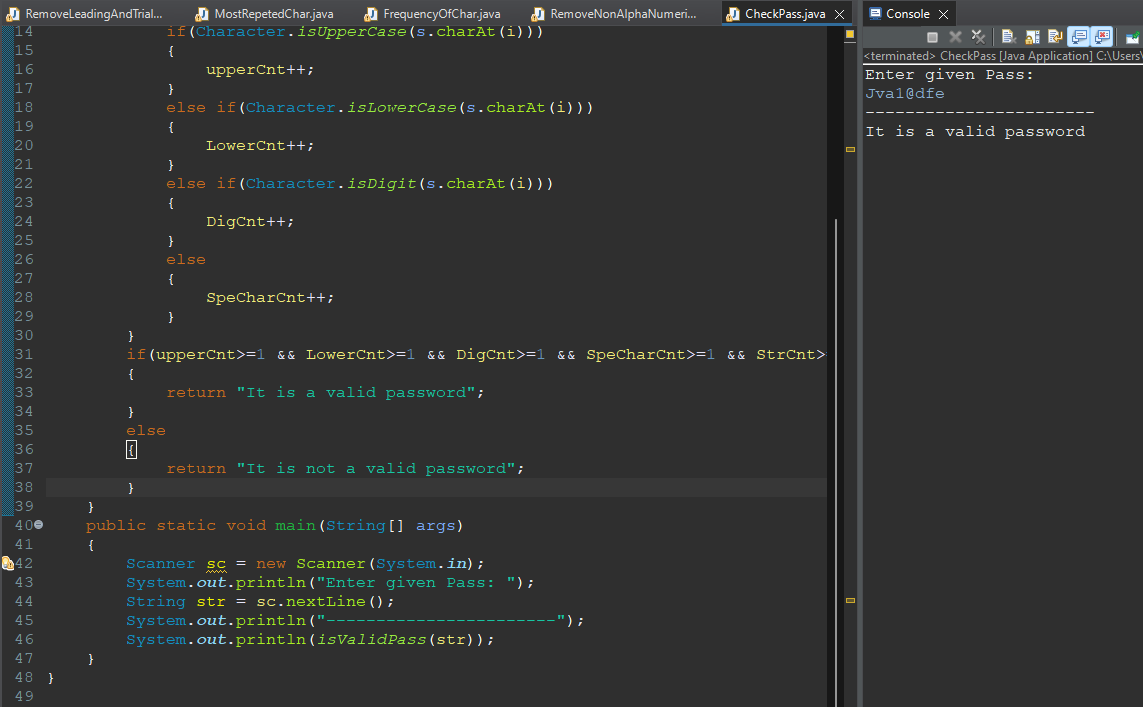
**alphanumeric.**

****

**31. Write a program that takes in a string and checks if it is a valid password (meets**

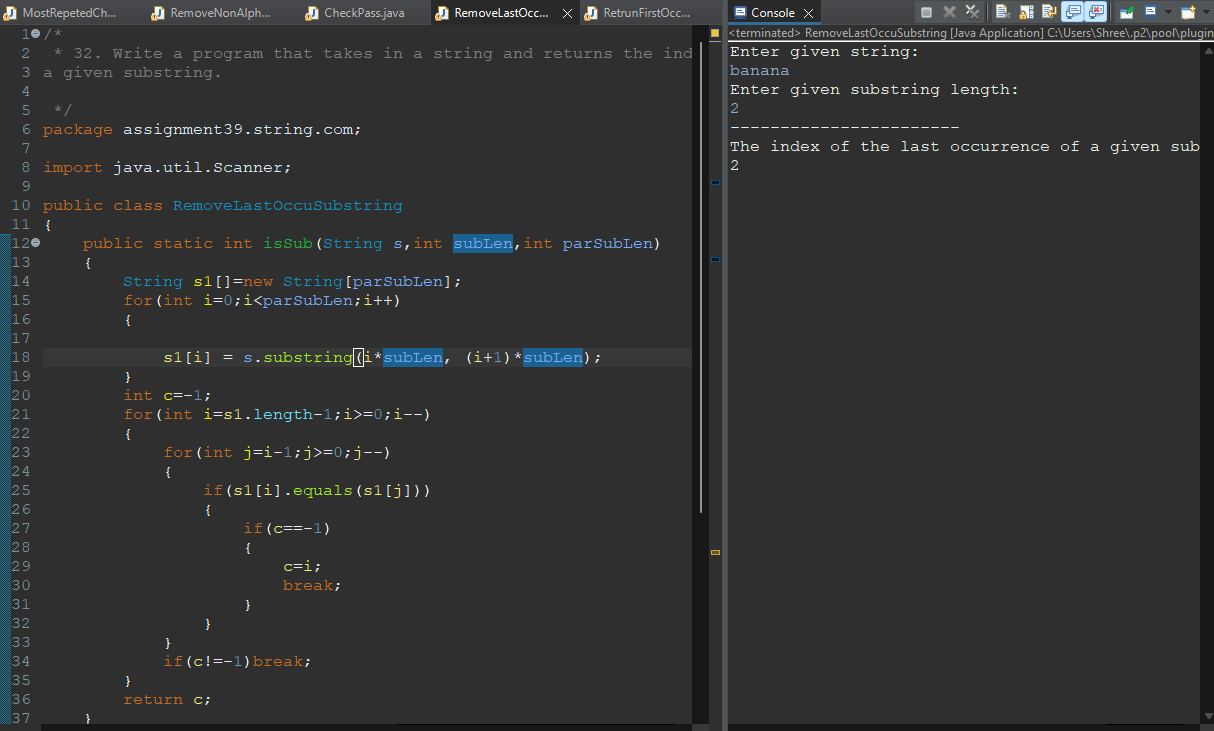
**certain requirements such as length, complexity, etc.).**

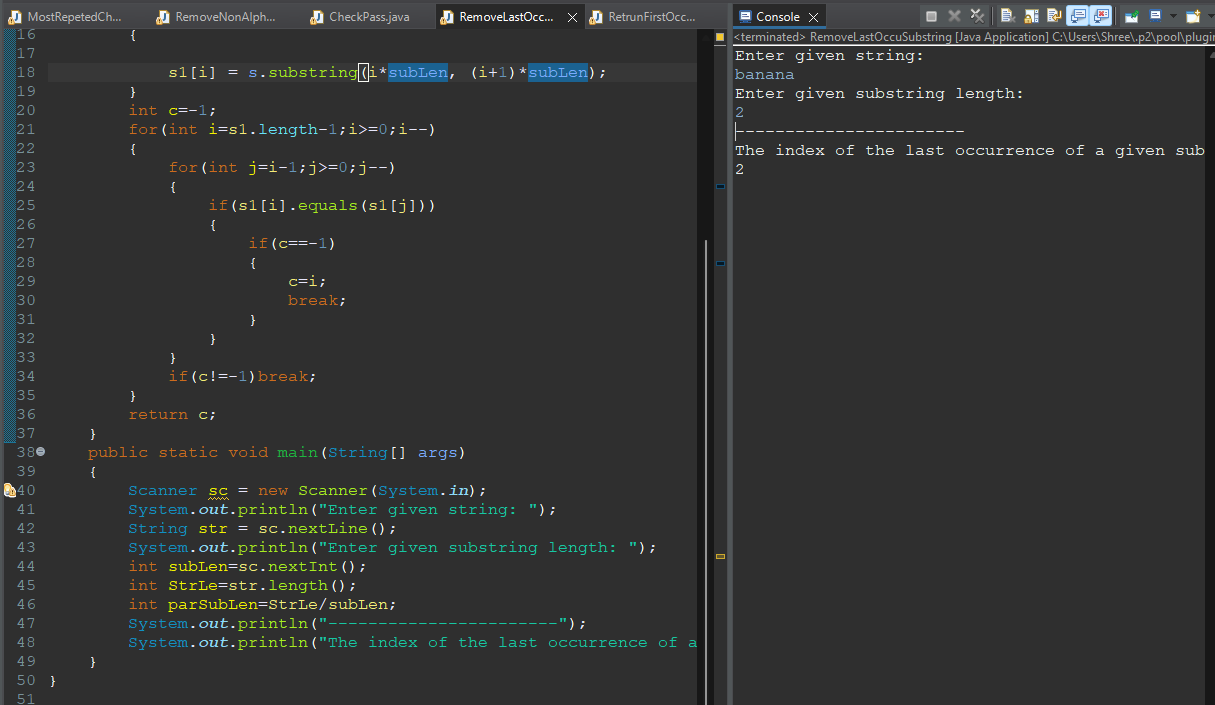
****

****

**32. Write a program that takes in a string and returns the index of the last occurrence of**

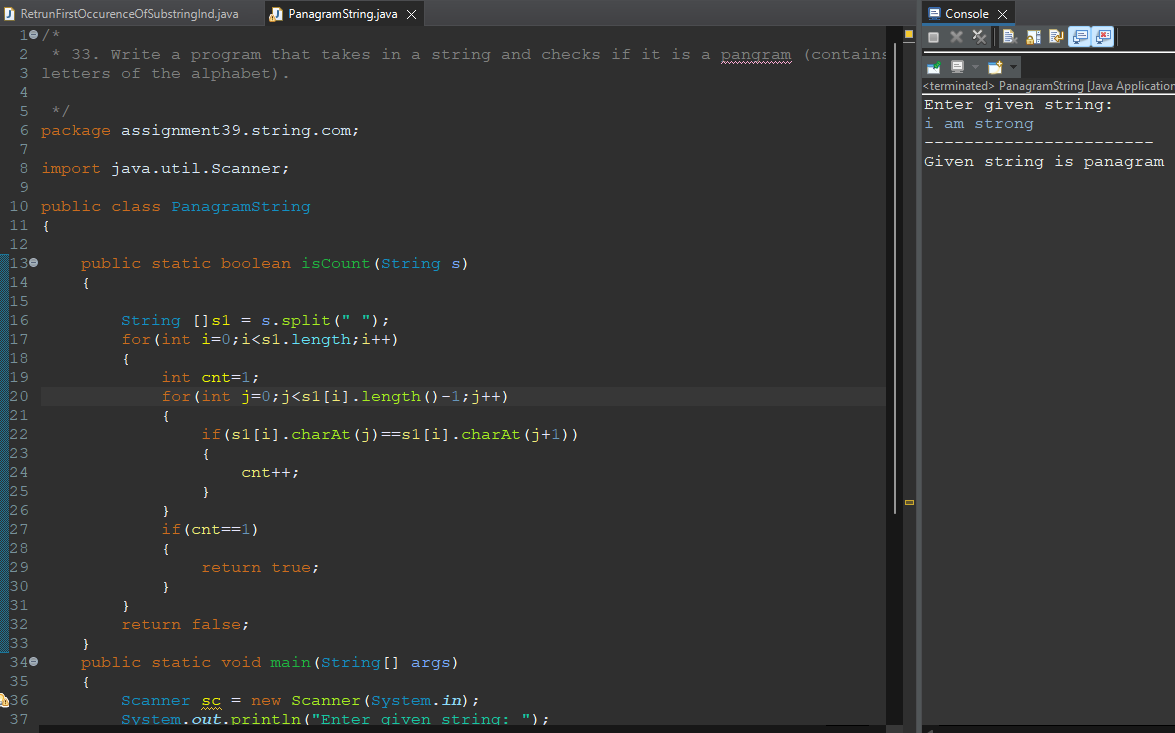
**a given substring.**

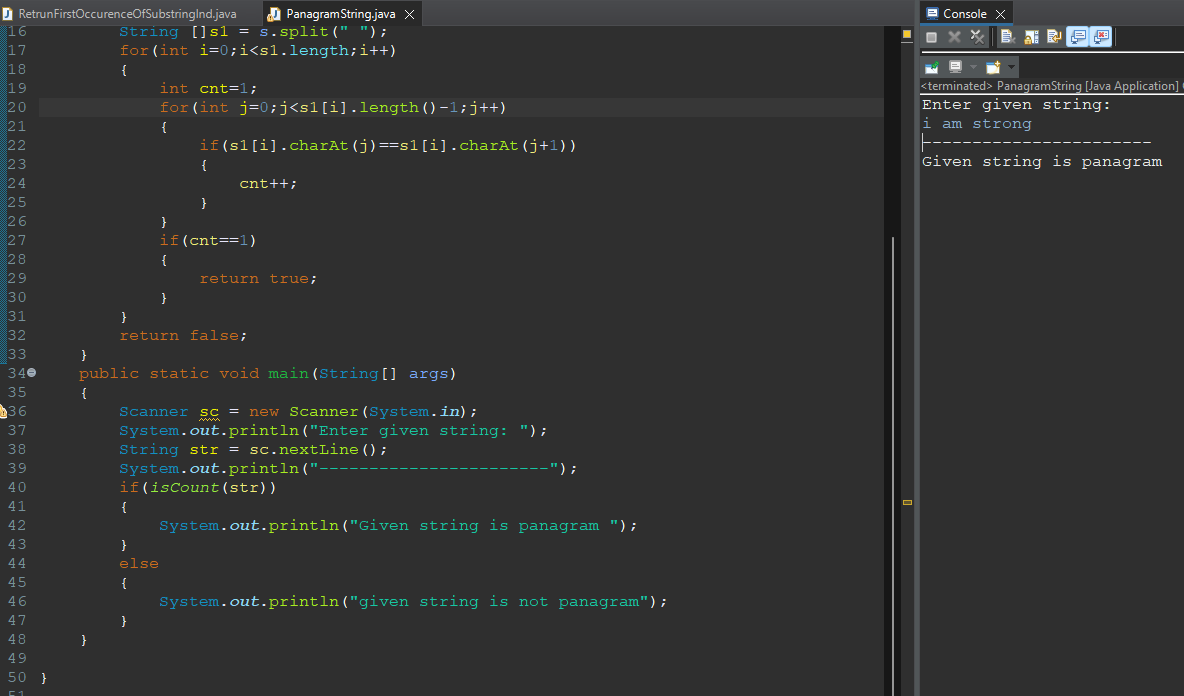
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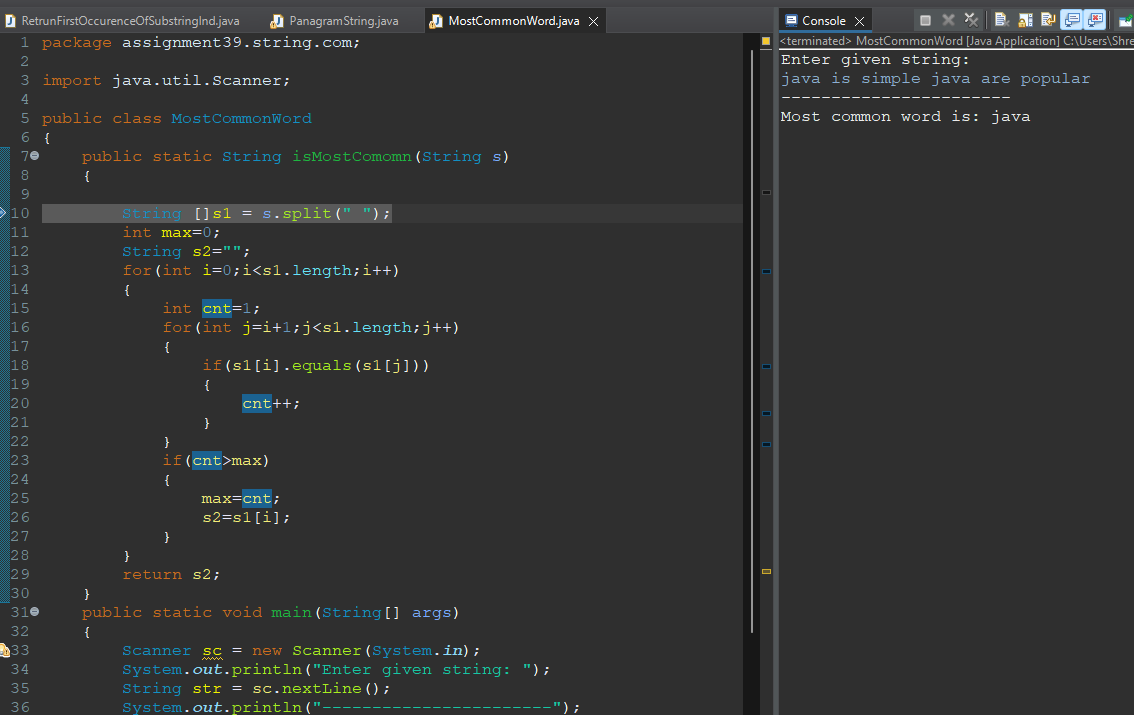
**33. Write a program that takes in a string and checks if it is a pangram (contains all**

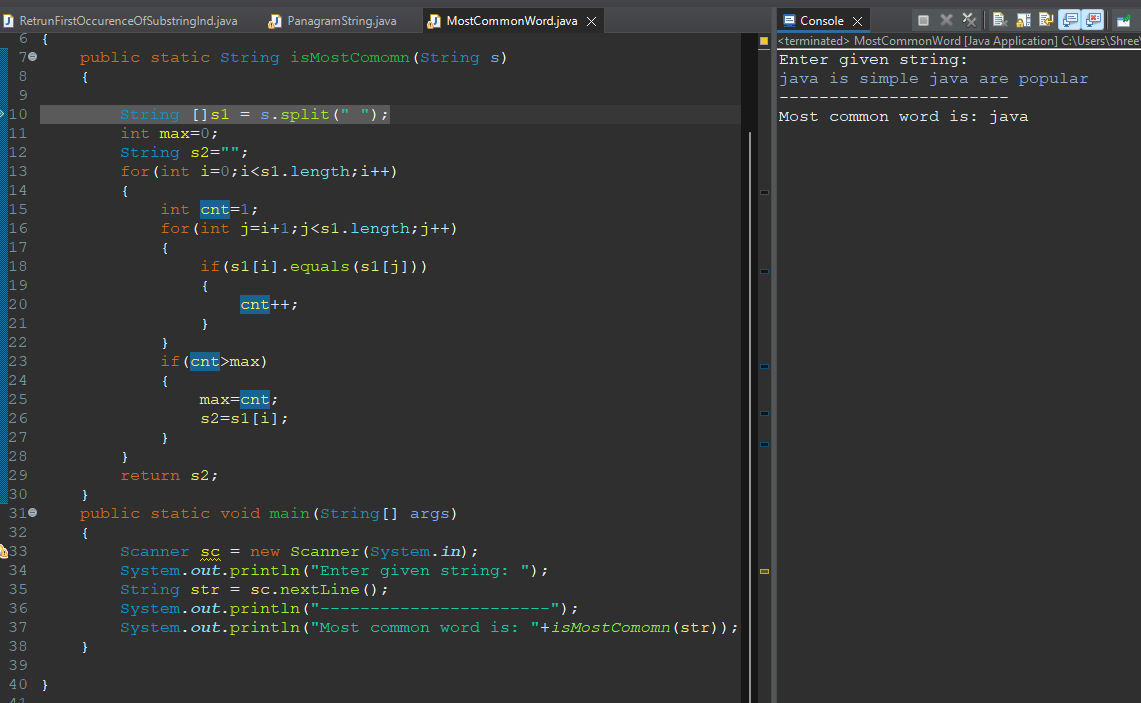
**letters of the alphabet).**

****

****

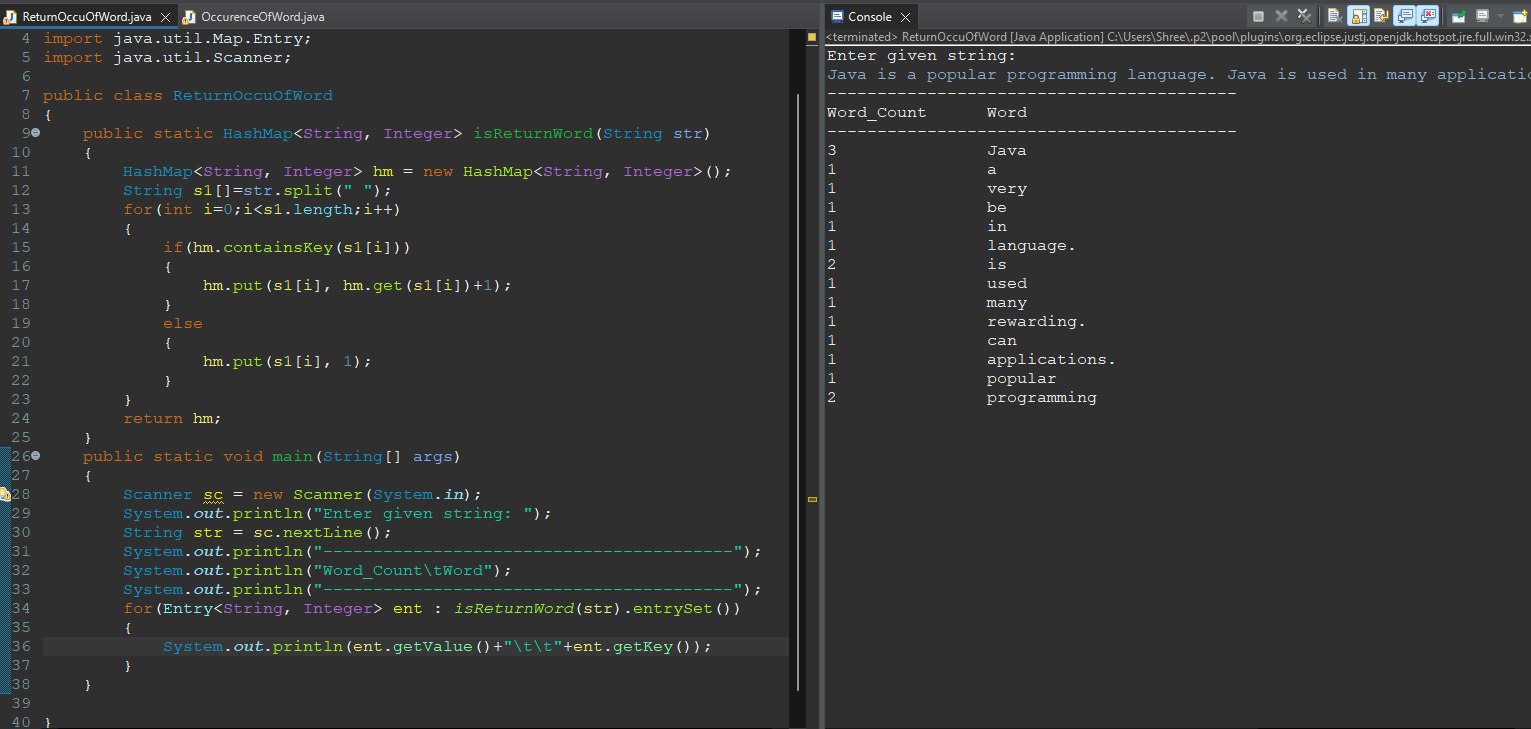
**34. Write a program that takes in a string and returns the most common word in it.**

****

****

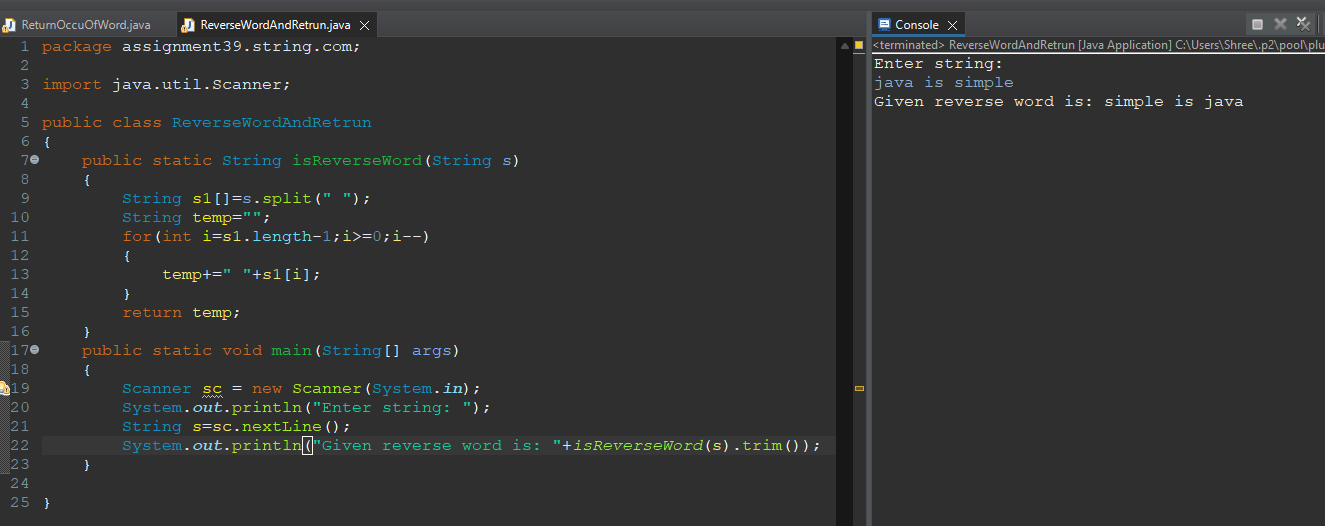
**35. Write a program that takes in a string and returns the number of occurrences of each**

**word in it.**

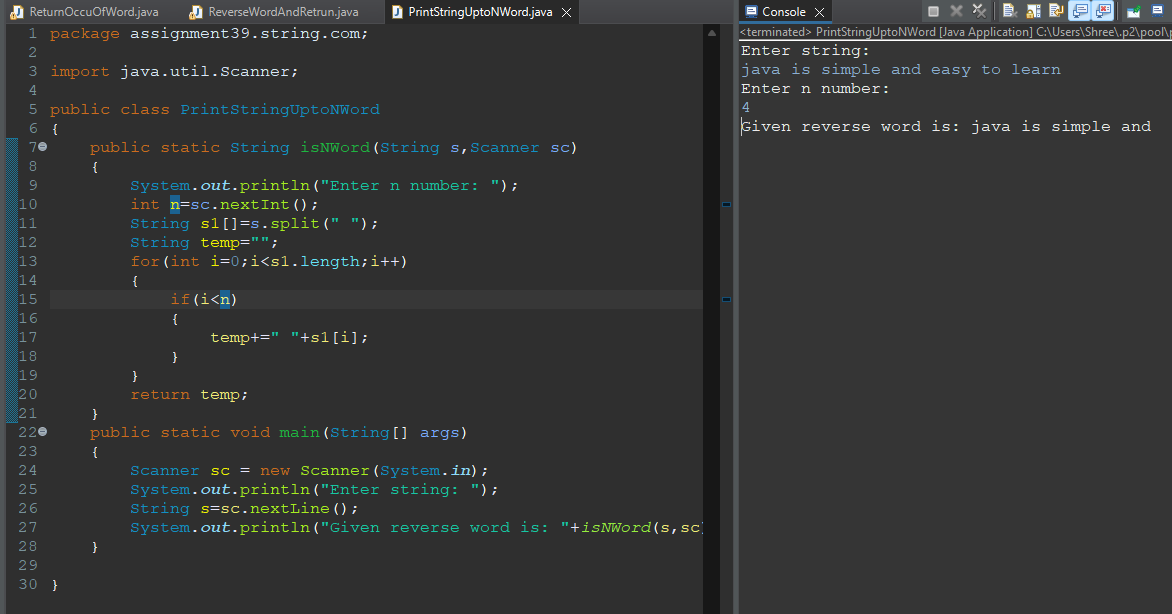
****

**36. Write a program that takes in a string and returns a new string with all the words**

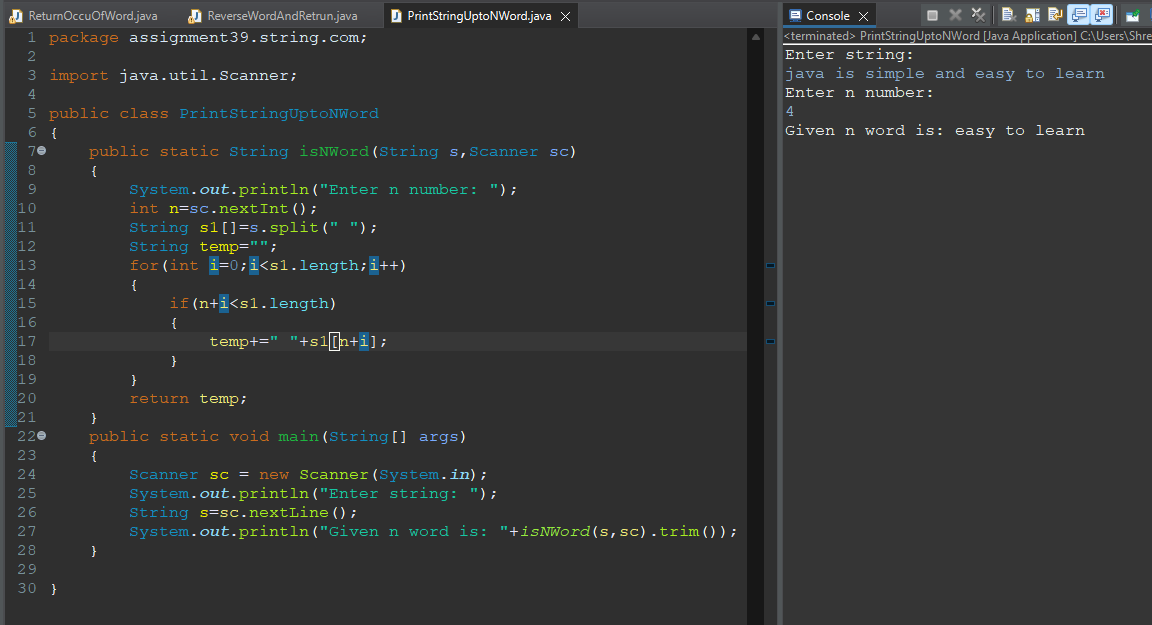
**reversed.**

****

**37. Write a program that takes in a string and returns the first n words.**

****

**38. Write a program that takes in a string and returns the last n words.**

****

**39. Write a program that takes in a string and checks if it is a valid Roman numeral.**

**40. Write a program that takes in a string and returns the number of times a given word**

**appears in it.**

**41. Write a program that takes in a string and returns the longest common prefix of all the**

**words in it.**

**42. Write a program that takes in a string and checks if it is a valid XML document.**

**43. Write a program that takes in a string and returns the smallest lexicographically**

**rotated version of it.**

**44. Write a program that takes in a string and replaces all spaces with a given character.**

**45. Write a program that takes in a string and returns the words sorted by length.**

**46. Write a program that takes in a string and checks if it is a valid JSON document.**

**47. Write a program that takes in a string and returns the number of times each character**

**appears in it, ignoring case.**

**48. Write a program that takes in a string and removes all consecutive vowels.**

**49. Write a program that takes in a string and returns the length of the longest substring**

**that contains no repeating characters.**

**50. Write a program that takes in a string and returns the words in reverse order.**

**51. Write a program that takes in a string and returns the length of the shortest substring**

**that contains all vowels.**

**52. Write a program that takes in a string and returns the number of times each word**

**appears in it, ignoring the case.**

**53. Write a program that takes in a string and returns a new string with all the vowels**

**replaced with a given character.**

**54. Write a program that takes in a string and returns the longest substring that contains**

**only distinct characters.**

**55. Write a program that takes in a string and returns the words sorted alphabetically.**

**56. Write a program that takes in a string and returns the number of times each character**

**appears in it, ignoring whitespace and case.**

**57. Write a program that takes in a string and returns the number of times each word**

**appears in it, sorted by frequency.**

**58. Write a program that takes in a string and returns the length of the longest**

**palindrome that can be formed by rearranging its characters.**

**59. Write a program that takes in a string and returns a new string with all the words in**

**reverse order and their letters reversed as well.**

**60. Write a program that takes in two strings and returns their longest common**

**subsequence.**

**61. Write a program that takes in a string and returns a new string with all the words**

**reversed, but the order of the words preserved.**

**62. Write a program that takes in a string and returns a new string with all the consonants**

**replaced with a given character.**

**63. Write a program that takes in a string and returns the length of the longest substring**

**without repeating characters.**

**64. Write a program that takes in a string and returns a new string with all the words in**

**reverse order, but the letters of each word in the original order.**

**65. Write a program that takes in a string and returns the length of the longest substring**

**that is a palindrome.**

**66. Write a program that takes in a string and returns a new string with all the words**

**sorted by the number of vowels they contain.**

**67. Write a program that takes in a string and returns a new string with all the characters**

**replaced with their ASCII codes.**

**68. Write a program that takes in a string and returns a new string with all the words**

**sorted by the number of consonants they contain.**

**69. Write a program that takes in a string and returns a new string with all the words**

**sorted by the sum of the ASCII codes of their letters.**