Algorithm

Aim: To the print the total number of sentences in the paragraph, to print each sentence and the no of vowels present in each sentence, all palindrome words in the paragraph and to print all the word starting with an uppercase and ending with a lowercase.

1). Start

2). main() – a). Input a Paragraph and store it in sentence.

b). String palindrome_words = " ";
String upper_lower = " ";

c). StringTokenizer sentences = new StringTokenizer(input,".?!");

d). System.out.println("\nNumber of sentences: "+sentences.countTokens());

e). if(sentences.countTokens()>5)
System.out.println("\nError Message: Number of sentences is higher than five !");

f). while(sentences.hasMoreTokens())

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{
    String sentence = sentences.nextToken();
    StringTokenizer words = new StringTokenizer(sentence," ");
    int count = 0;

    System.out.print("\nSentence : "+sentence);
    while(words.hasMoreTokens())
    {
       String word = words.nextToken();

       for(int i=0;i<word.length();i++)
       {
          char ch = Character.toUpperCase(word.charAt(i));
          if(ch=='A'||ch=='E'||ch=='I'||ch=='O'||ch=='U')
          {
             count++;
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            }
          }
        }
        System.out.println("\nNumber of vowels: "+count);

        StringTokenizer words2 = new StringTokenizer(sentence," ");
        while(words2.hasMoreTokens())
        {
          String word = words2.nextToken();
          String rev = "";

          if(word.length()>1)
          {
            for(int i=word.length()-1; i>=0; i--)
            {
              rev+=word.charAt(i);
            }

            if(Character.isUpperCase(word.charAt(0)) &&
Character.isLowerCase(word.charAt(word.length()-1)))
              upper_lower = upper_lower+word+", ";

            if(rev.equalsIgnoreCase(word))
              palindrome_words = palindrome_words+word+", ";
          }
        }

      }
```

g). System.out.println("\nPalindrome Words:
"+palindrome_words.substring(0,palindrome_words.length()-2));
System.out.println("Words starting with Uppercase and ending in lowercase:
"+upper_lower.substring(0,upper_lower.length()-2));

3). Stop