String manipulation and search

The following program illustrates the use of loops and the standard class \texttt{String}, inputting a line of text, searching it for the first blank space, and extracting the part of the string up to and including the space.

\begin{verbatim}
/*
 srchspc.java:
 Prompts for a line of text, displays the first word.

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 */
 import java.util.Scanner;

 public class srchspc
 {
   public static void main(String[] args)
   {
     // Prompt for line:
     System.out.print("Enter a string: ");
     Scanner cin = new Scanner(System.in);
     String buf = cin.nextLine();

     // Find first space:
     int i = 0, spaceloc = 0;
     boolean found = false;
     while (i < buf.length() && !found)
     {
       if (buf.charAt(i) == ' ')
       {
         spaceloc = i;
         found = true;
       }
       i = i + 1;
     }

     // Display the part of the string up to and including the space:
     System.out.println("Hello " + buf.substring(0,spaceloc));
   }
 }
\end{verbatim}

The \texttt{while} loop executes until either the counter (\texttt{i}) reaches the end of the string, or until a flag, \texttt{found}, is set. The data type of \texttt{found} is \texttt{boolean}, and it is set to \texttt{true} when and if a space is found.

The methods \texttt{length}, \texttt{charAt}, and \texttt{substring}, of the class \texttt{String} are called in this program.

Input of strings is illustrated. A scanner (input) stream object, \texttt{cin}, is created. The scanner method \texttt{nextLine} fetches a series of characters from the keyboard terminated by \texttt{Enter}. 