

## //Some helpful methods

[illegible]

```

        if(matcher.matches())inputs[i]="<Identifier,\""+inputs[i]+"\">";
        else {
            matcher=patternN.matcher(inputs[i]);

            if(matcher.matches())inputs[i]="<Number,\""+inputs[i]+"\">";
            else {if (inputs[i].isEmpty());
            else {
                System.out.println("Error !! "+inputs[i]+"(word
No "+(i+1)+") could not be recognized");
                System.exit(0);
                }}}}}}}}}}}
    }
}
}

```

\*\*\*\*\*

```

import java.io.*;
public class FileString {

    public static String readFile( String file ) throws IOException {
        BufferedReader reader = new BufferedReader( new FileReader
(file));
        String line = null;
        StringBuilder stringBuilder = new StringBuilder();
        String ls = System.getProperty("line.separator");

        while( ( line = reader.readLine() ) != null ) {
            stringBuilder.append( line );
            stringBuilder.append( ls );
        }

        return stringBuilder.toString();
    }

    public static void writeFile(String name, String text){
        try {
            if (new File(name).exists()){
                System.out.println("CHANGE FILE'S NAME OR DELETE
THE OLD ONE !");System.exit(0);}
            FileWriter writer=new FileWriter(name);
            BufferedWriter buffered=new BufferedWriter(writer);
            buffered.write(text);
            buffered.close();
        }
        catch (Exception e) {
            System.err.println(e.getMessage());
        }
    }
}

```

**Input:**

```
def fib(x) = if x = 1 then 0 else if x = 2 then 1 else fib(x-1) +fib(x-2)
```

## Output:

```
<Keyword,"def"> , <Identifier,"fib"> , <Openpar,"("> , <Identifier,"x"> ,  
<Closepar,")"> , <Equal,"="> , <Keyword,"if"> , <Identifier,"x"> ,  
<Equal,"="> , <Number,"1"> , <Keyword,"then"> , <Number,"0"> ,  
<Keyword,"else"> , <Keyword,"if"> , <Identifier,"x"> , <Equal,"="> ,  
<Number,"2"> , <Keyword,"then"> , <Number,"1"> , <Keyword,"else"> ,  
<Identifier,"fib"> , <Openpar,"("> , <Identifier,"x"> , <Minus,"-"> ,  
<Number,"1"> , <Closepar,")"> , <Plus,"+"> , <Identifier,"fib"> ,  
<Openpar,"("> , <Identifier,"x"> , <Minus,"-"> , <Number,"2"> ,  
<Closepar,")">
```