

# Touchqode

- Touchqode is an IDE for use on your android phone
- Features
  - Syntax highlighting
  - Code suggestions
  - Incremental search
  - Developer keyboard
  - File synchronization
  - Java, C++, Python, Ruby, HTML, Javascript



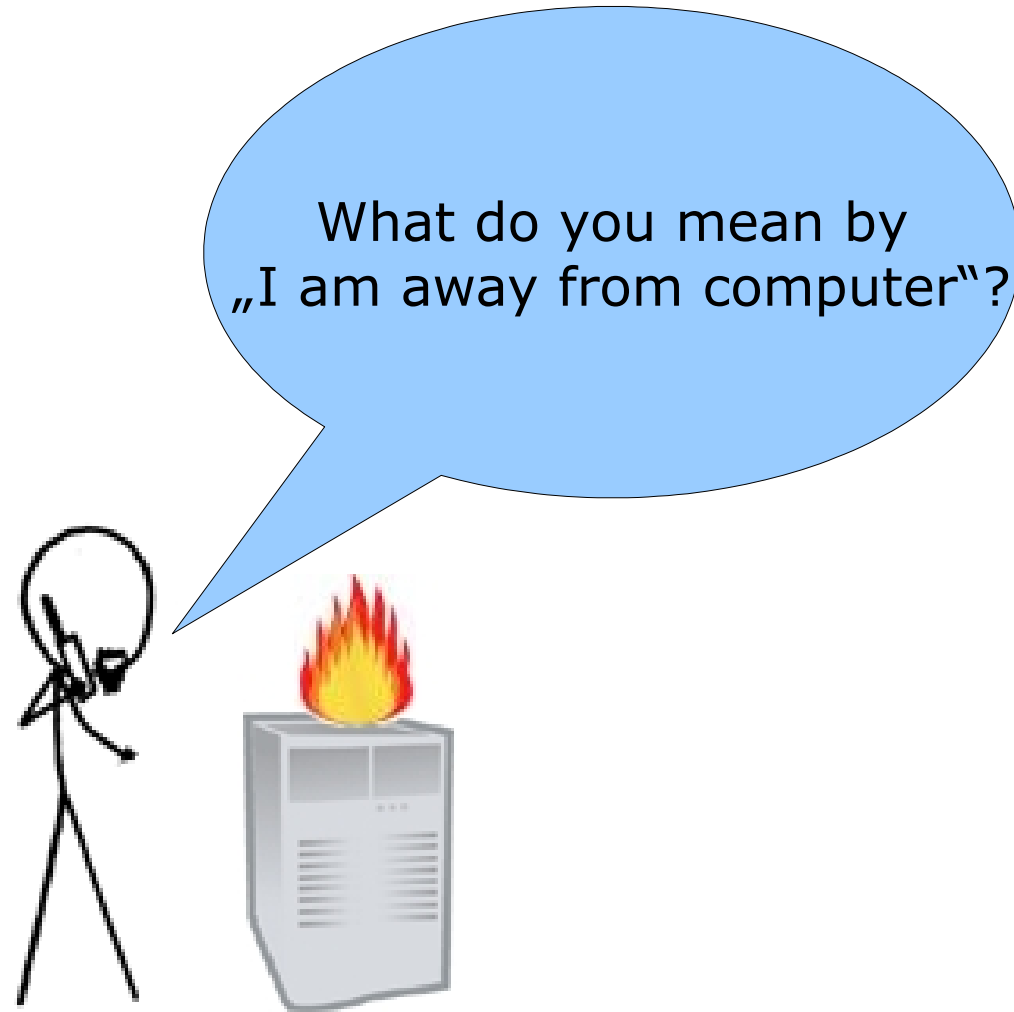
# Mobile IDE

- Programming using your mobile phone is ...
  - Cool idea!
  - But why would I want to do it?



# Emergency

touchqode



# Commute

touchqode



Do you think you could take out your **laptop** here?



```
private int[] quicksort(int[] list, int start, int end)
{
    if (start < end)
    {
        int pivot = (int) ((new Random()).nextDouble())
        int temp = list[pivot];
```



# Developing mobile IDE



# Considerations

- Reduce number of potential actions by using vim-like modes (View, Edit, Search)
- Make keyboard deterministic
- Navigate quickly within file and between files
- Keep files in sync
- Make a lot of simple pieces work together



```
package example.helloworld;

public class HelloWorld {

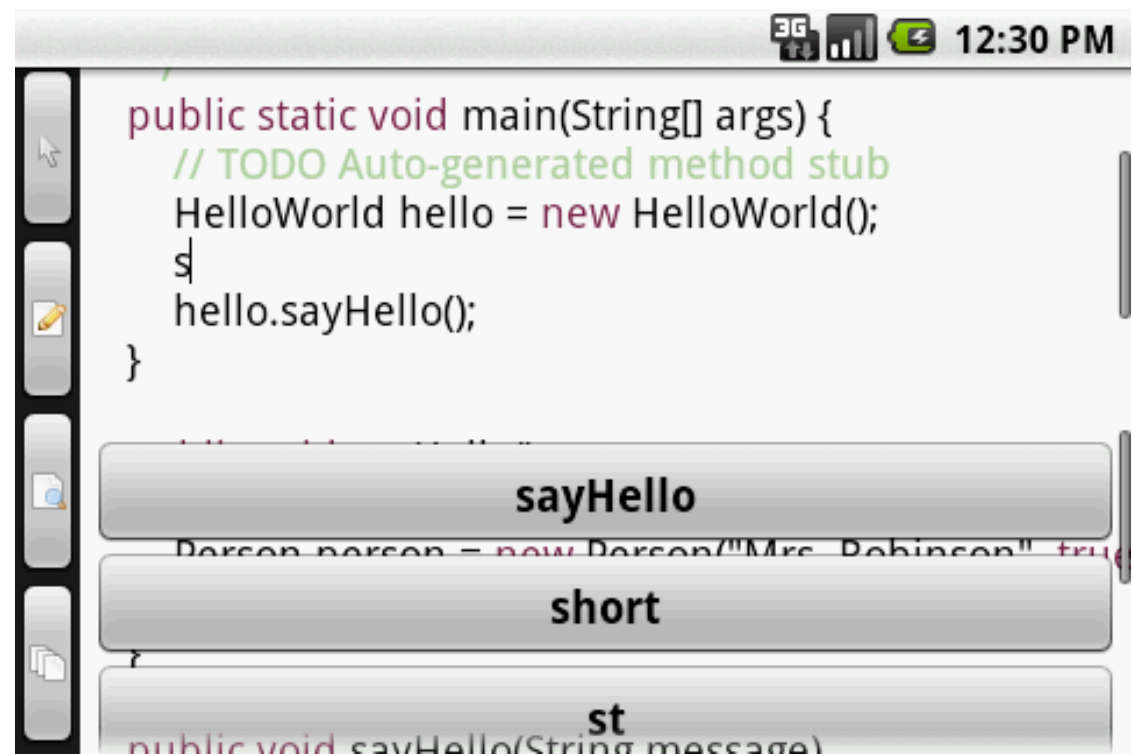
    /**
     * @param args
     */
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        HelloWorld hello = new HelloWorld();
        hello.sayHello();
    }

    public void sayHello()
}
```

# Code suggestions or autocomplete

touchqode

- JavaCC Parser
- SQLite database
- Prefix tree



The screenshot shows a mobile IDE interface with a status bar at the top displaying '3G', signal strength, battery, and the time '12:30 PM'. The code editor contains the following Java code:

```
public static void main(String[] args) {  
    // TODO Auto-generated method stub  
    HelloWorld hello = new HelloWorld();  
    s  
    hello.sayHello();  
}
```

Below the code, a dropdown menu is open, showing suggestions for the variable 's'. The suggestions are:

- sayHello
- Person person = new Person("Mrs. Robinson", true
- short
- st

The suggestion 'st' is currently selected, and the code below it is partially visible: `public void sayHello(String message)`.

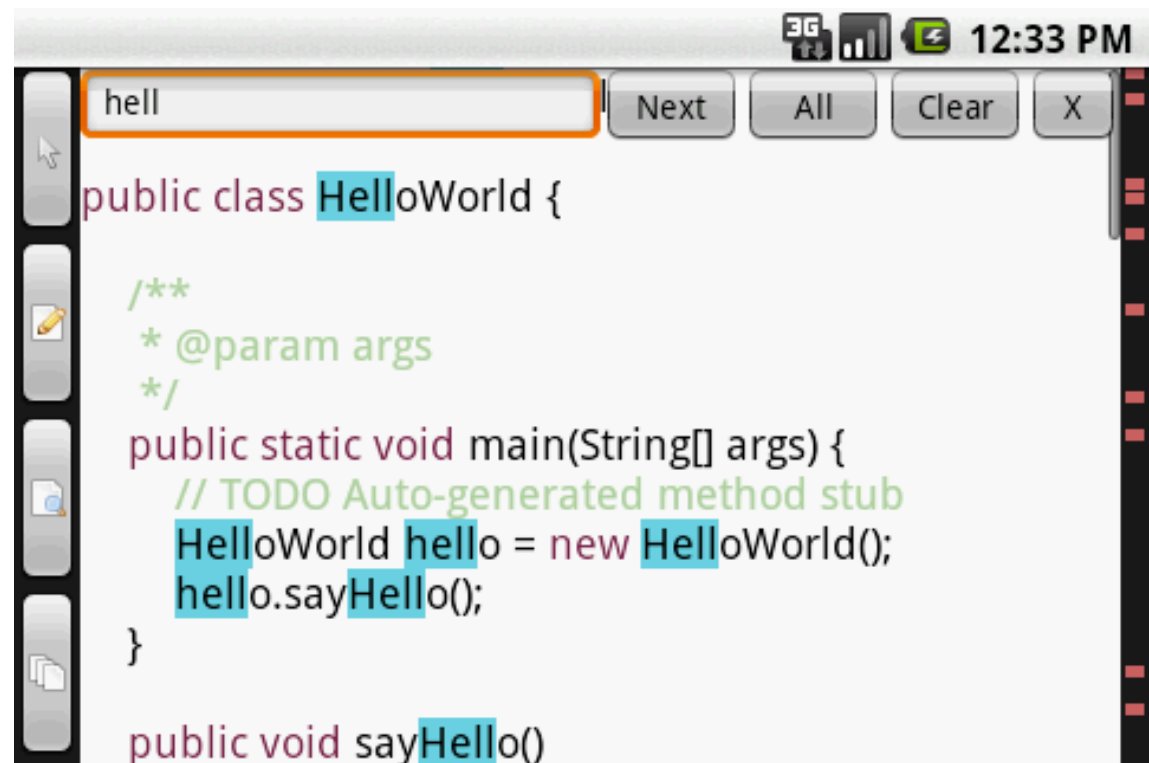




# Syntax highlighting and Incremental search

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- EditText
  - + CharacterStyle
- ANTLR Lexer
- `java.util.Scanner`



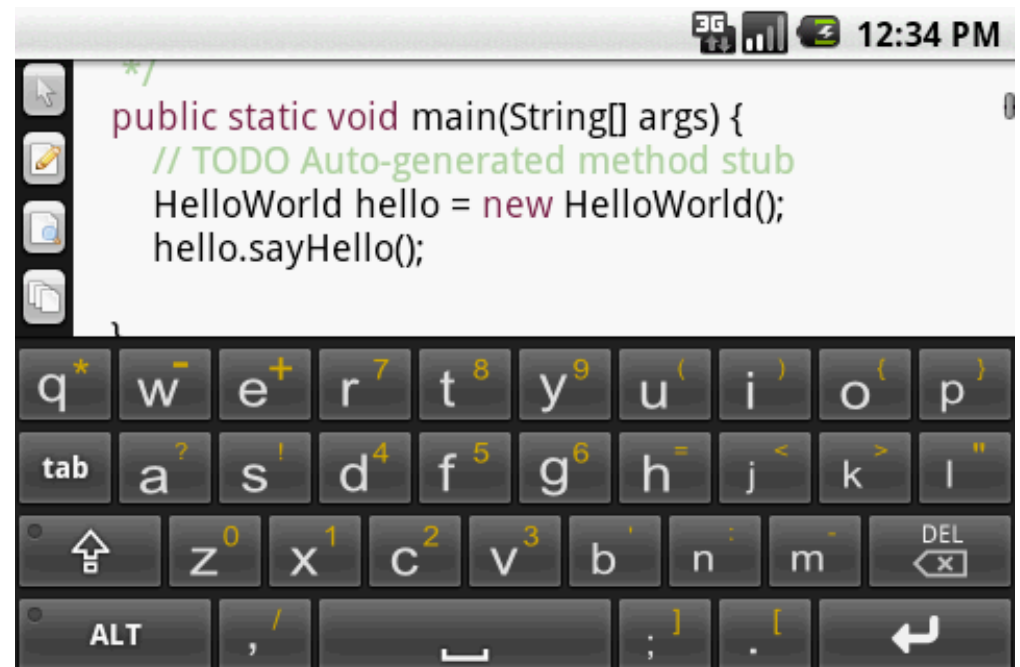
The screenshot shows an Android IDE interface. At the top, there is a search bar containing the text "hell". To the right of the search bar are four buttons: "Next", "All", "Clear", and "X". Below the search bar, the code in the editor is highlighted with blue boxes to show the search results. The code is as follows:

```
public class HelloWorld {  
  
    /**  
     * @param args  
     */  
    public static void main(String[] args) {  
        // TODO Auto-generated method stub  
        HelloWorld hello = new HelloWorld();  
        hello.sayHello();  
    }  
  
    public void sayHello()  
}
```



# Custom keyboard

- Modified Soft Keyboard example
- Custom images
- special characters - ;,()[] tab
- ALT is a nightmare



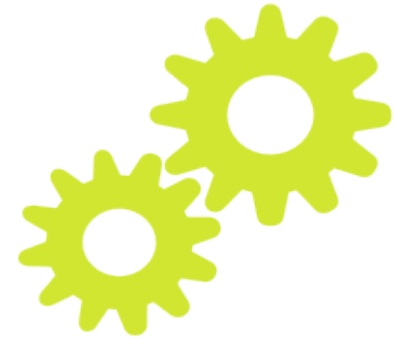
# Intent filter

- Supported intents
  - Intents – VIEW, EDIT, PICK
  - Mime type – “text/\*”
- Works great with dropbox and any other synchronization service



# What's next?

- remote compilation
- project workspace
  - autocomplete of imported classes
  - fuzzy class search
- improved autocomplete
- easier synchronization



# Know more

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Touchqode Editor

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Programmer Keyboard

