

# Source Deps Reviewer

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## Motivation

We need a tool to discover all shared library dependencies across modules in an Android device. Although we have some tools existing, it's still far from sufficient. These hidden dependencies undermine the foundation of Treble project.

## SourceDR

### Overview

Basically, sourceDR is a tool to discover all shared library dependencies across modules in an Android device. The aim of this tool is to accelerate the process of labeling dependencies and save time for reviewers when the source code gets modified.

### Features

- web-based UI
- embedded syntax highlighter(prism)
- jump to pattern line
- integrate with google code search to accelerate process
- temporary grep-like search
- similar entries suggestion

## Implementation

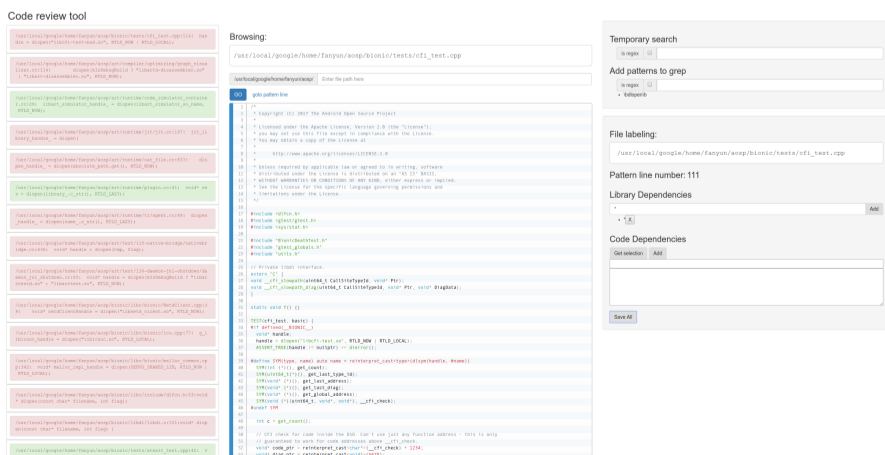
### Programming Languages Used

- Python
- Javascript(jQuery)
- Html/Css

### Tools and Frameworks

- Flask backend
- Prism, a syntax highlighter

## User Interface



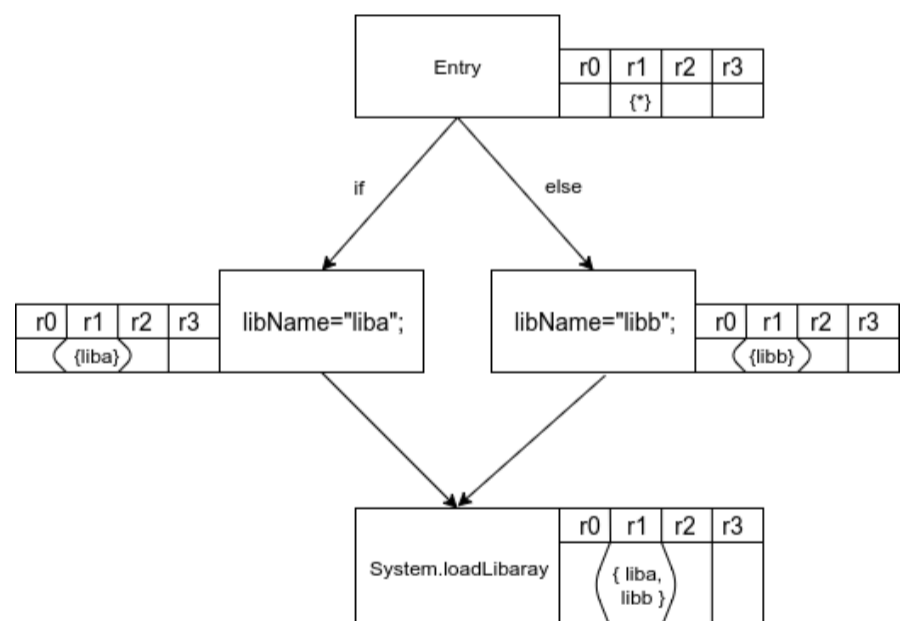
## LoadLibAnalyzer

### Overview

LoadLibAnalyzer is a tool that aims to find out all possible arguments of all invocations to System.loadLibrary(). After constructing a control flow graph from reading Dalvik bytecode, we perform a data flow analysis on the flow graph.

### Examples

```
public class Test {
    public static void main(String args[]) {
        String libName;
        if (args.length > 5) {
            libName = "liba";
        } else {
            libName = "libb";
        }
        System.loadLibrary(libName);
    }
}
```



## Implementation

### Programming Languages Used

- Java

### Tools and Frameworks

- Soot, a Java analysis and optimization framework
- Maven