

Guidelines for Moss

Plagiarism Check for Programs

<http://theory.stanford.edu/~aiken/moss/>

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*Note: this guide is Unix-based. Errors might happen under Windows environment.

Step 1 - Prepare Files Accordingly

(The working directory here is where all files and directories are located, including `moss.pl`, `solution_directory`, `base_directory`, `solutions`, and potential archived result from Moss)

- Download all students' codes from blackboard and unzip them under “`solutions`” folder.
Note: under `solutions`, there must be *directly* zip files of submissions of each student with no archive folder.
- Execute `copyFile.sh` like:
`./copyFile.sh solutions`
(Note: After execution, `solutions` folder should contain folders named like “Project1Task1AndrewID”. However, there are students who don't name their Netbeans project zips as required. We need to manually check any outliers.)
- Create a folder named “`solutions_directory`”.
- Copy students' submission folders to `solutions_directory` task by task. For example, sort folders by name and copy all folders named “Project1Task1AndrewID”.
- A valid directory containing all students' solutions should look like this:

```
solution_directory
|- Project1Task1student1
|  |- classA.java
|  |- ...
|- Project1Task1student2
|  |- ...
|- Project1Task1student3
|  |- ...
```

- Create another folder called “**base_directory**”. If there are sample codes provided by the faculties, add source codes into this directory. (Note: base files need be served one by one as parameters in **moss.pl**).

Step 2 – Execute the Submission Program

Execute **moss.pl** given parameters: (Please read the instructions in **moss.pl** for more details)

```
./moss [-l language] [-d] [-b basefile1] ... [-b basefileN] [-m #] [-c "string"] file1
file2 file3
```

For example:

```
./moss -l java -d -b base_directory/file1.java -b
base_directory/file2.java -c "Project1"
solutions_directory/*/*
```

(if you can't execute it, execute: `chmod 777 moss.pl`)

Wait until the program provides a url for results. And this might take a short while like one or two minutes.

Step 3 – Fetch Results from Moss

Moss platform is deployed as an online service, we don't have access directly to the system, but we can access the result given by Moss.

- Option 1: View on browser
`http://moss.stanford.edu/results/result#`
- Option 2: download for local archives
`wget -r -np http://moss.stanford.edu/results/result#`

Step 4 – Check Results

In the webpage, we will get results given by Moss. The results are *somewhat* sorted by percentages that two files have in common. We need to MANUALLY go into top-rated files before making any conclusion about academic plagiarism!

Screenshots:

The screenshot shows the Moss Results page in a web browser. The address bar displays "moss.stanford.edu". The page has a header with navigation links: "Some words on getting started with Moss.", "Plagiarism Detection", and "Moss Results". The main content area is titled "Moss Results" and includes the date "Wed Feb 10 16:52:44 PST 2016" and the command "Options -l java -d -m 10". Below this is a link to "How to Read the Results | Tips | FAQ | Contact | Submission Scripts | Credits". A table shows the results for two files, File 1 and File 2, both with a 77% match rate. The table has columns for File 1, File 2, and Lines Matched. The match rate for both files is 77%, and the number of lines matched is 63. A note at the bottom states: "Any errors encountered during this query are listed below."

File 1	File 2	Lines Matched
/Users/jianlin/NetBeansProjects/MossSubmission/solution_directory/abc/ (77%)	/Users/jianlin/NetBeansProjects/MossSubmission/solution_directory/jianlinz/ (77%)	63

The screenshot shows the Moss Results page in a web browser, displaying a comparison of two files. The address bar displays "moss.stanford.edu". The page has a header with navigation links: "Some words on getting started with Moss.", "Plagiarism Detection", and "Matches for /Users/jianlin/NetBeansProjects/MossSubmission/solu...". The main content area shows a comparison of two files, File 1 and File 2, both with a 77% match rate. The table has columns for File 1, File 2, and Lines Matched. The match rate for both files is 77%, and the number of lines matched is 63. The code for both files is displayed side-by-side, showing a Java class named EchoServerTCP. The code for File 1 is on the left, and the code for File 2 is on the right. The code for File 1 is a complete implementation of the EchoServerTCP class, while the code for File 2 is a partial implementation, showing only the main method and some comments.

File 1	File 2	Lines Matched
/Users/jianlin/NetBeansProjects/MossSubmission/solution_directory/abc/ (77%)	/Users/jianlin/NetBeansProjects/MossSubmission/solution_directory/jianlinz/ (77%)	63

```
public class EchoServerTCP {  
    public static void main(String args[]) {  
        Socket clientSocket = null;  
        try {  
            int serverPort = 7777; // the server port we are using  
  
            // Create a new server socket  
            ServerSocket listenSocket = new ServerSocket(serverPort);  
  
            /*  
             * Block waiting for a new connection request from a client.  
             * When the request is received, "accept" it, and the rest  
             * the tcp protocol handshake will then take place, making  
             * the socket ready for reading and writing.  
             */  
            clientSocket = listenSocket.accept();  
            // If we get here, then we are now connected to a client.  
  
            // Set up "in" to read from the client socket  
            Scanner in;  
            //in = new Scanner(clientSocket.getInputStream());  
  
            // Set up file reader  
            Scanner fileReader;  
  
            // Set up "out" to write to the client socket  
            PrintWriter out;  
        }  
    }  
}
```

```
>>> file: EchoServerTCP.java  
/*  
 * To change this license header, choose License Headers in Project Properties.  
 * To change this template file, choose Tools | Templates  
 * and open the template in the editor.  
 */  
  
/**  
 *  
 * @author jianlin  
 */  
import java.net.*;  
import java.io.*;  
import java.util.Scanner;  
  
public class EchoServerTCP {  
    public static void main(String args[]) {  
        Socket clientSocket = null;  
        try {  
            int serverPort = 7777; // the server port we are using  
  
            // Create a new server socket  
            ServerSocket listenSocket = new ServerSocket(serverPort);  
  
            /*  
             * Block waiting for a new connection request from a client.  
             */  
        }  
    }  
}
```