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Team Name: Git Rekt

Team Assignment #1 Output

```
 Directory of D:\Dev Stuff\Eclipse Workspace\CSCD437\src

04/10/2017  05:51 PM    <DIR>          .
04/10/2017  05:51 PM    <DIR>          ..
04/10/2017  10:43 AM               544 Quine1.java
04/10/2017  09:19 AM             2,461 Replication1.java
               2 File(s)          3,005 bytes
               2 Dir(s)  264,424,656,896 bytes free

D:\Dev Stuff\Eclipse Workspace\CSCD437\src>javac Replication1.java

D:\Dev Stuff\Eclipse Workspace\CSCD437\src>dir
 Volume in drive D is DATA
 Volume Serial Number is A65D-33B0

 Directory of D:\Dev Stuff\Eclipse Workspace\CSCD437\src

04/11/2017  09:25 AM    <DIR>          .
04/11/2017  09:25 AM    <DIR>          ..
04/10/2017  10:43 AM               544 Quine1.java
04/11/2017  09:25 AM             2,317 Replication1.class
04/10/2017  09:19 AM             2,461 Replication1.java
               3 File(s)          5,322 bytes
               2 Dir(s)  264,424,652,800 bytes free

D:\Dev Stuff\Eclipse Workspace\CSCD437\src>java Replication1.java
```

Files before running the program.

```
D:\Dev Stuff\Eclipse Workspace\CSCD437\src>java Replication1
import java.io.File;
import java.io.FileWriter;
import java.nio.file.FileSystems;
import java.nio.file.Files;
import java.nio.file.Path;
import java.util.Scanner;

public class Replication2 {
    public static void main(String args[]){
        String ourName = "Replication2";

        if(ourName.equals("Replication5")){
            System.exit(0);
        }

        String s ="";
        String newFileName ="";
        File f = new File("Replication2.java");
        File newFile = new File("Replication3.java");


        try {
            Scanner sc = new Scanner(f);
            FileWriter fileWriter = new FileWriter(newFile);
            String line;
            int counter = 0;

            while (sc.hasNextLine()) {
                line = sc.nextLine();

                if(line.contains(ourName)){
                    int i =line.indexOf(ourName) + 11;
                    String charS = "";
                    charS += line.charAt(i);
                    char newNumber = Integer.toString(Integer.parseInt(charS)+1).charAt(0);

                    StringBuilder newString = new StringBuilder (line);
                    newString.setCharAt(i, newNumber);

                    line = newString.toString();
                    newFileName = "Replication"+ newNumber;
                    counter++;
                }else if(counter == 3){
                    int i =line.indexOf("Replication") + 11;
                    String charS = "";
                    charS += line.charAt(i);
                    char newNumber = Integer.toString(Integer.parseInt(charS)+1).charAt(0);

                    StringBuilder newString = new StringBuilder (line);
                    newString.setCharAt(i, newNumber);

                    line = newString.toString();
                    counter = 0;
                }

                s += line;
                s += '\n';
                fileWriter.write(line);
                fileWriter.write('\n');
            }

            fileWriter.flush();
            fileWriter.close();


            System.out.print(s);
            sc.close();

            Process pro1 = Runtime.getRuntime().exec("javac "+ newFileName + ".java");
            pro1.waitFor();
            Process pro2 = Runtime.getRuntime().exec("java "+ newFileName);

        }catch(Exception e){
            e.printStackTrace();
        }
    }
}
```

Program output.

```
                fileWriter.write(line);
                fileWriter.write('\n');
            }

            fileWriter.flush();
            fileWriter.close();


            System.out.print(s);
            sc.close();

            Process pro1 = Runtime.getRuntime().exec("javac "+ newFileName + ".java");
            pro1.waitFor();
            Process pro2 = Runtime.getRuntime().exec("java "+ newFileName);

        }catch(Exception e){
            e.printStackTrace();
        }
    }
}

D:\Dev Stuff\Eclipse Workspace\CSCD437\src>dir
 Volume in drive D is DATA
 Volume Serial Number is A65D-33B0

 Directory of D:\Dev Stuff\Eclipse Workspace\CSCD437\src

04/11/2017  10:24 AM    <DIR>          .
04/11/2017  10:24 AM    <DIR>          ..
04/10/2017  10:43 AM               544 Quine1.java
04/11/2017  09:25 AM             2,317 Replication1.class
04/10/2017  09:19 AM             2,461 Replication1.java
04/11/2017  10:24 AM             2,317 Replication2.class
04/11/2017  10:24 AM             2,384 Replication2.java
04/11/2017  10:24 AM             2,317 Replication3.class
04/11/2017  10:24 AM             2,384 Replication3.java
04/11/2017  10:24 AM             2,317 Replication4.class
04/11/2017  10:24 AM             2,384 Replication4.java
04/11/2017  10:24 AM             2,299 Replication5.class
04/11/2017  10:24 AM             2,384 Replication5.java
              11 File(s)         24,108 bytes
               2 Dir(s)  264,424,615,936 bytes free

D:\Dev Stuff\Eclipse Workspace\CSCD437\src>
```

Files after running the program.

```
D:\Dev Stuff\Eclipse Workspace\CSCD437\src>java Replication1 > file_out_put.txt

D:\Dev Stuff\Eclipse Workspace\CSCD437\src>dir
 Volume in drive D is DATA
 Volume Serial Number is A65D-33B0

 Directory of D:\Dev Stuff\Eclipse Workspace\CSCD437\src

04/11/2017  10:35 AM    <DIR>          .
04/11/2017  10:35 AM    <DIR>          ..
04/11/2017  10:35 AM             2,384 file_out_put.txt
04/10/2017  10:43 AM               544 Quine1.java
04/11/2017  09:25 AM             2,317 Replication1.class
04/10/2017  09:19 AM             2,461 Replication1.java
04/11/2017  10:35 AM             2,317 Replication2.class
04/11/2017  10:35 AM             2,384 Replication2.java
04/11/2017  10:35 AM             2,317 Replication3.class
04/11/2017  10:35 AM             2,384 Replication3.java
04/11/2017  10:35 AM             2,317 Replication4.class
04/11/2017  10:35 AM             2,384 Replication4.java
04/11/2017  10:35 AM             2,299 Replication5.class
04/11/2017  10:35 AM             2,384 Replication5.java
              12 File(s)         26,492 bytes
               2 Dir(s)  264,424,423,424 bytes free

D:\Dev Stuff\Eclipse Workspace\CSCD437\src>
```

Putting the output of program into a txt file for comparison.

```
D:\Dev Stuff\Eclipse Workspace\CSCD437\src>fc Replication1.java out_put.txt
Comparing files Replication1.java and OUT_PUT.TXT
***** Replication1.java

public class Replication1 {
    public static void main(String args[]){
        String ourName = "Replication1";

***** OUT_PUT.TXT

public class Replication2 {
    public static void main(String args[]){
        String ourName = "Replication2";

*****

***** Replication1.java
        String newFileName ="";
        File f = new File("Replication1.java");
        File newFile = new File("Replication2.java");

***** OUT_PUT.TXT
        String newFileName ="";
        File f = new File("Replication2.java");
        File newFile = new File("Replication3.java");

*****


D:\Dev Stuff\Eclipse Workspace\CSCD437\src>_
```

Program output vs. original source code using FC command. Obviously the only difference will be the string variable to keep track of the interation we are on, because the program would otherwise go forever.