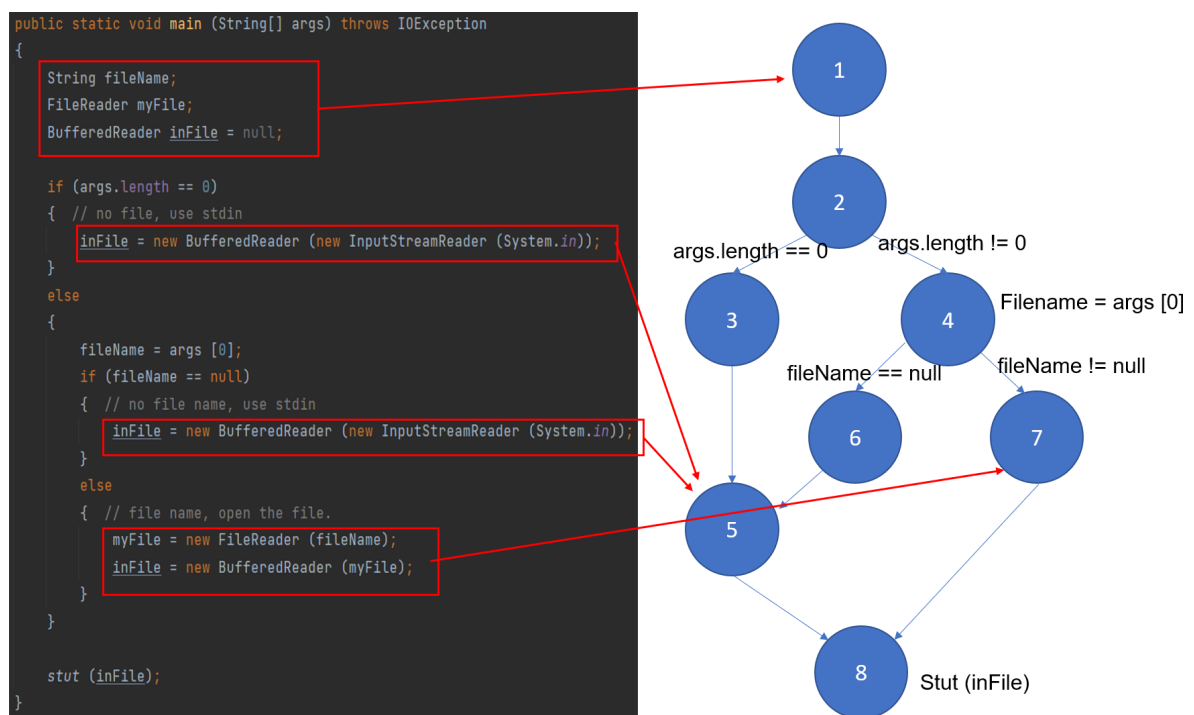


Software Testing HW3

Test for Stutter

(a) Draw control flow graphs for the methods in Stutter.

public static void main (String[] args) throws IOException



private static void stut (BufferedReader inFile) throws IOException

```

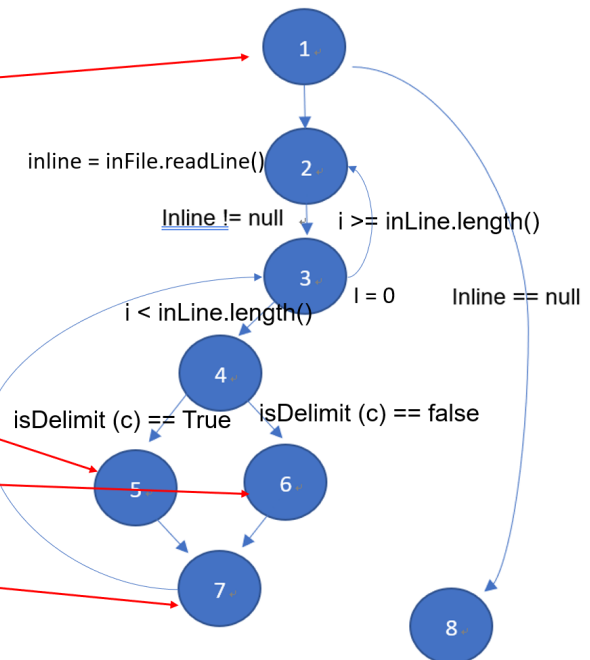
private static void stut (BufferedReader inFile) throws IOException
{
    String inLine;
    char c;
    int linecnt = 1;
    while ((inLine = inFile.readLine()) != null)
    { // For each line

        for (int i=0; i<inLine.length(); i++)
        { // for each character
            c = inLine.charAt(i);

            if (isDelimit (c))
            { // Found an end of a word.
                checkDups (linecnt);
            }
            else
            {
                lastdelimit = false;
                curWord = curWord + c;
            }

            checkDups (linecnt);
            linecnt++;
        }
    } // end stut
}

```



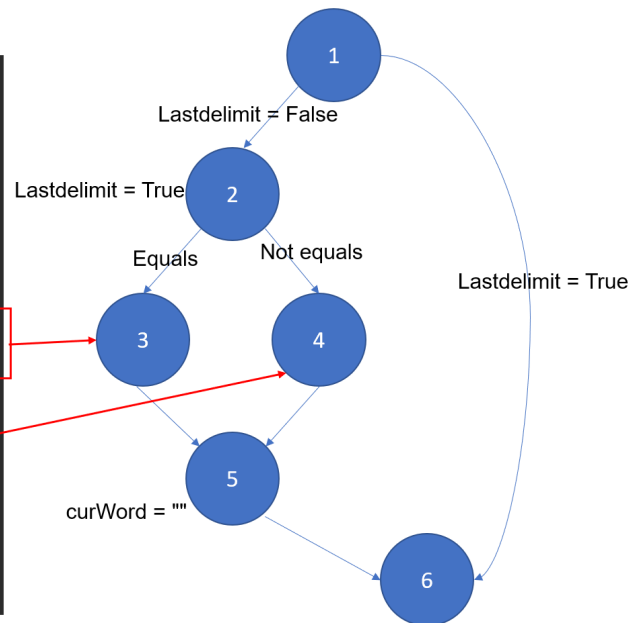
private static void checkDups (int line)

```

private static void checkDups (int line)
{
    if (lastdelimit)
        return; // already checked, keep skipping

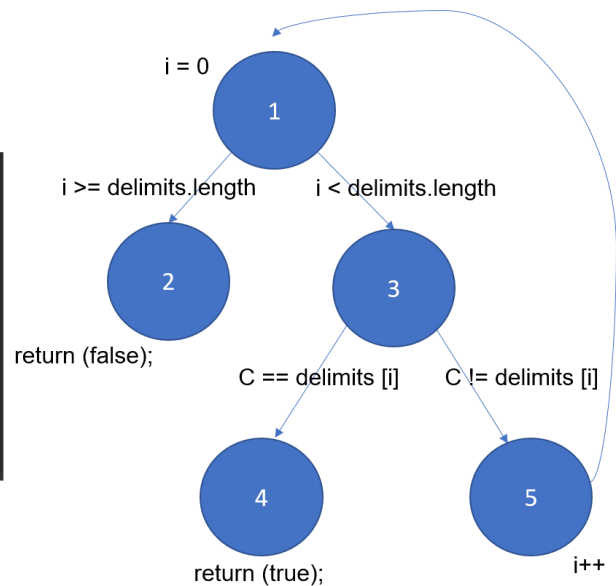
    lastdelimit = true;
    if (curWord.equals(prevWord))
    {
        System.out.println ("Repeated word on line " + line + ": " +
            prevWord + " " + curWord);
    }
    else
    {
        prevWord = curWord;
    }
    curWord = "";
} // end checkDups

```



private static boolean isDelimit (char C)

```
private static boolean isDelimit (char C)
{
    for (int i = 0; i < delimits.length; i++)
        if (C == delimits [i])
            return (true);
    return (false);
}
```



(b) List all the call sites.

第幾行	call site
46	stut (infile);
63	isDelimit (c)
65	checkDupes (linecnt);
73	checkDupes (linecnt);

(c) List all coupling du-pairs for each call site.

Pairs of locations(method name, variable name, statement)

stut (infile)

last def	first use
(main(), infile, 30)	(stut(), infile, 56)
(main(), infile, 37)	(stut(), infile, 56)
(main(), infile, 42)	(stut(), infile, 56)

isDelimit (c)

last def	first use
(stut(), c, 61)	(isDelimit(), C, 102)

checkDupes (linecnt)

last def	first use
(stut(), linecnt, 55)	(checkDupes(), line, 88)
(stut(), linecnt, 74)	(checkDupes(), line, 88)

(d) Create test data to satisfy All-Coupling Use Coverage for Stutter.

args.length	args[0]	content in infile
0	0	"SoftwareTesting" //System.in()
1	null	"SoftwareTesting" //System.in()
1	"File"	"Software Testing"
1	"File"	"Software;Testing"
1	"File"	"Software,Testing"
1	"File"	"Software\nTesting"
1	"File"	"Software!Testing"
