

DEMOGRAPHIC INFORMATION

1.- Gender: Male (☒) Female (☐)

2.- Age: 27

3.- Studies: PhD (☐ ongoing) Master (☒) Bachelor (☐) Student (☐) None (☐)

4.- Years of experience in software development: 4

5.- Years of experience in Java software development: 3

6.- Rate from 1 (None) to 5 (Expert) your level of knowledge of Java: 1(☐) 2(☐) 3(☒) 4(☐) 5(☐)

EVALUATION

A. The following Java methods are part of the "jvector" project, which is a pure Java embedded vector search engine, used by DataStax Astra DB and Apache Cassandra.

1. The method is included in the "GraphIndexBuilder" class, and has the following code:

```
private static Bits _____(int node) {
    return new Bits() {
        @Override
        public boolean get(int index) {
            return index != node;
        }
        @Override
        public int length() {
            // length is max node id, which could be larger than size after deletes
            throw new UnsupportedOperationException();
        }
    };
}
```

For the following method names, indicate whether they are appropriate for the previous method. Rate from 1 (disagree) to 5 (strongly agree) your level of agreement.

Method name	Is the name appropriate?	Comments (optional)
createNonSelfBits	1() 2() 3() 4() 5(X)	
createBits	1(X) 2() 3() 4() 5()	General
createNotSelfBits	1() 2(X) 3() 4() 5()	
graphIndexBuilderMethod	1() 2() 3() 4(X) 5()	

2. The method is included in the " ConcurrentNeighborSet" class, and has the following code:

```
void _____(int node, float score, boolean limitConnections) {
    neighborsRef.getAndUpdate(current -> {
        NodeArray next = current.copy();
        if (limitConnections) {
            // remove the worst edge to make room for the new one
            next.size = min(next.size, maxConnections - 1);
        }
        next.insertSorted(node, score);
        return next;
    });
}
```

For the following method names, indicate whether they are appropriate for the previous method. Rate from 1 (disagree) to 5 (strongly agree) your level of agreement.

Method name	Is the name appropriate?	Comments (optional)
updateNeighbors	1() 2() 3() 4(X) 5()	
insertNotDiverse	1(X) 2() 3() 4() 5()	Diverse in this context is not clear
concurrentNeighborSetMethod	1() 2(X) 3() 4() 5()	SetNeighbor is enough, Method in the name is redundant

insertNonDiverseNode	1(X) 2() 3() 4() 5()	Diverse in this context is not clear
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B. The following Java methods are part of the "Log4-detector" project, which is a scanner that detects Log4J vulnerabilities.

1. The method is included in the "Log4JDetector" class, and has the following code:

```
private static boolean _____(BufferedInputStream in) {
    in.mark(4);
    try {
        int[] fourBytes = pop4(in);
        return isZipSentinel(fourBytes);
    } catch (IOException ioe) {
        return false;
    } finally {
        try {
            in.reset();
        } catch (IOException ioe) {
            throw new RuntimeException("BufferedInputStream.reset() failed: " + ioe);
        }
    }
}
```

For the following method names, indicate whether they are appropriate for the previous method. Rate from 1 (disagree) to 5 (strongly agree) your level of agreement.

Method name	Is the name appropriate?	Comments (optional)
log4JDetectorMethod	1() 2() 3(X) 4() 5()	
startsWithZipMagic	1(X) 2() 3() 4() 5()	
isZipSentinel	1() 2() 3() 4() 5(X)	It is more specific
isZipFile	1() 2() 3() 4(X) 5()	

2. The method is included in the "Strings" class, and has the following code:

```
public static Long _____(String s, long defaultVal) {
    s = s != null ? s.trim() : "";
    if ("".equals(s)) {
        return defaultVal;
    } try {
        return Long.parseLong(s);
    } catch (RuntimeException e) {
        return defaultVal;
    }
}
```

For the following method names, indicate whether they are appropriate for the previous method. Rate from 1 (disagree) to 5 (strongly agree) your level of agreement.

Method name	Is the name appropriate?	Comments (optional)
parseLongWithDefault	1() 2() 3(X) 4() 5()	With causes confusion
stringMethod	1(X) 2() 3() 4() 5()	
parseLongOrDefault	1() 2() 3() 4() 5(X)	

parseLong	1(X) 2() 3() 4() 5()	
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C. The following Java methods are part of the "ramen" project, which implements a simple social network, and was used in a Java programming course.

1. The method is included in the internal class "App" of the class "Main", and has the following code:

```
private void _____() {
    gMap.clear();
    home.removeAllChildren();
    tree.reload(home);
    for (Group g : app.listGroups()) {
        gTreeNode supernode = g.getSupergroup() == null ? home
            : gMap.get(g.getSupergroup());
        gTreeNode node = new gTreeNode(g);
        tree.insertNodeInto(node, supernode, supernode.getChildCount());
        gMap.put(g, node);
    }
    for (int i = 0; i < gTree.getRowCount(); i++)
        gTree.expandRow(i);
}
```

For the following method names, indicate whether they are appropriate for the previous method. Rate from 1 (disagree) to 5 (strongly agree) your level of agreement.

Method name	Is the name appropriate?	Comments (optional)
refreshTreeView	1() 2() 3() 4(X) 5()	
fetchGroups	1() 2() 3() 4() 5(X)	
appMethod	1(X) 2() 3() 4() 5()	
updateGroupTree	1() 2() 3(X) 4() 5()	

2. The method is included in the "Question" class, and has the following code:

```
public List<User> _____() {
    Group g = (Group) this.getTo(); //TODO: Review
    List<User> ret = new ArrayList<>(g.getMembers());
    List<User> ans = this.whoAnswered();
    for (User u: g.getMembers()) {
        if (ans.contains(u) || u.getClass() == Sensei.class) {
            ret.remove(u);
        }
    }
    return ret;
}
```

For the following method names, indicate whether they are appropriate for the previous method. Rate from 1 (disagree) to 5 (strongly agree) your level of agreement.

Method name	Is the name appropriate?	Comments (optional)
getUsersWhoDidNotAnswer	1() 2() 3() 4() 5(X)	getUsersNoAnswer
findUsersWhoDidntAnswer	1() 2() 3() 4(X) 5()	
whoDidntAnswer	1() 2() 3(X) 4() 5()	
questionMethod	1(X) 2() 3() 4() 5()	Not clear

D. The following Java methods are part of the "compiler" project, which is a compiler for a simple programming language, for use in education.

1. The method is included in the "SymbolTable" class, and has the following code:

```
public void _____(String lexeme, Symbol.SymbolType kind, ArrayList<String> argumentsDataType,
String returnType, int numOfVar) {
    Symbol symbol = new Symbol();
    symbol.lexeme = lexeme;
    symbol.kind = kind;
    symbol.argumentsDataType = argumentsDataType;
    symbol.returnType = returnType;
    symbol.numOfVar = numOfVar;
    symbols.add(symbol);
}
```

For the following method names, indicate whether they are appropriate for the previous method. Rate from 1 (disagree) to 5 (strongly agree) your level of agreement.

Method name	Is the name appropriate?	Comments (optional)
symbolTableCompilerMethod	1() 2(X) 3() 4() 5()	Remove class name in method
addToSymbolTable	1() 2() 3() 4() 5(X)	
addFunctionSymbolTable	1() 2(X) 3() 4() 5()	
addSubroutineSymbol	1(X) 2() 3() 4() 5()	

2. The method is included in the "Parser" class, and has the following code:

```
private void _____(String vmCodes) {
    try {
        File log = new File(lexer.getFolderPath() + File.separator + className + ".vm");
        FileWriter fileWriter = new FileWriter(log.getAbsolutePath(), true);
        BufferedWriter bufferedWriter = new BufferedWriter(fileWriter);
        bufferedWriter.write(vmCodes);
        bufferedWriter.close();
        fileWriter.close();
    } catch (IOException e) {
        e.printStackTrace();
    }
}
```

For the following method names, indicate whether they are appropriate for the previous method. Rate from 1 (disagree) to 5 (strongly agree) your level of agreement.

Method name	Is the name appropriate?	Comments (optional)
vmCodeInput	1() 2(X) 3() 4() 5()	Input is too general
appendVmCodesToFile	1() 2() 3() 4() 5(X)	
parserMethod	1() 2(X) 3() 4() 5()	
insertVMCodesIntoVMFile	1() 2() 3(X) 4() 5()	VMCodetoFile

