

Welcome to our survey for understanding code comprehension\*. We are [author introduction] and we thank you for your interest and time.

In this survey, you will be prompted to compare pairs of code snippets. While functionally the same, the two snippets in a pair will differ in identifier names (as highlighted in the provided screenshots). Identifier names can be names of methods, variables and classes. We would like you to choose the code that is most comprehensible to you based on how easily you understand the purpose of the code snippet based on the identifier name.

It will take approximately 10 minutes to complete the questionnaire. Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. [IRB details]

To consent and begin, please click on the Start button. We highly appreciate your input.

\*Code comprehension is the process of understanding and interpreting the meaning, functionality, and structure of a piece of source code.

Effective code comprehension is crucial for tasks such as debugging, code reviews, software maintenance, and further development. It requires a combination of technical knowledge, analytical thinking, and sometimes familiarity with specific programming languages and frameworks.

### Demographic Information

Name:

Role/s you have had experience in:

1. Software developer
2. Software designer
3. Software tester
4. DevOps engineer
5. Software architect
6. QA tester
7. Software engineering researcher
8. Development lead/manager
9. Data scientist
10. Other \_\_\_\_\_

Years of experience in software engineering

1. Less than a year
2. 1-3 years
3. 4-6 years
4. 7-10 years
5. 10-15 years
6. More than 15 years

Gender

1. Female
2. Male
3. Other \_\_\_\_\_

Age:

1. 15-20
2. 21-25
3. 26-30
4. 31-35
5. 36-40
6. 41-45
7. 46-50
8. 51-55
9. 56-60
10. 61-65
11. 66-70

### Question Template

(Note: this is a template for the twenty questions we included in the survey. Each question has two images of the code snippets. The presentation of the two snippets is randomized. The sequence of the 20 questions is also randomized.)

```
CellLayoutLayoutParams layoutParams = (CellLayoutLayoutParams) wlp;  
  
int spanX = layoutParams.cellHSpan;  
int spanY = layoutParams.cellVSpan;  
int cellX = layoutParams.useTmpCoords ? layoutParams.getTmpCellX() : layoutParams.getCellX();  
int cellY = layoutParams.useTmpCoords ? layoutParams.getTmpCellY() : layoutParams.getCellY();
```

#### Code A

```
CellLayoutLayoutParams lp = (CellLayoutLayoutParams) wlp;  
  
int spanX = lp.cellHSpan;  
int spanY = lp.cellVSpan;  
int cellX = lp.useTmpCoords ? lp.getTmpCellX() : lp.getCellX();  
int cellY = lp.useTmpCoords ? lp.getTmpCellY() : lp.getCellY();
```

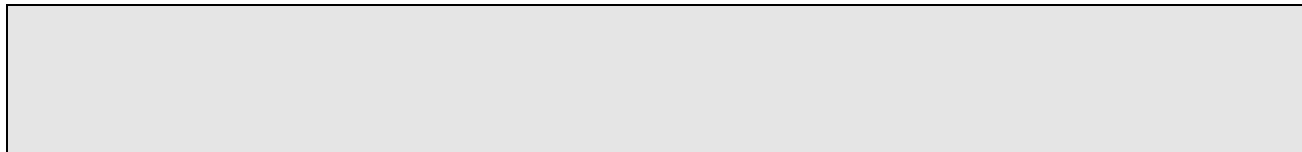
#### Code B

Code A and Code B contain variable names 'layoutParams' and 'lp' respectively. Please select the code snippet you find more comprehensible, based on these identifier names.

- ☐ Code A
- ☐ Code B
- ☐ I have no preference

Concluding Remarks

What aspects influenced your choice of identifier names? (Optional)



Feel free to provide any feedback you have about this survey. (Optional)



If you are interested in a follow-up interview, please provide your email address.

