

Participant Characterization Form

This form aims at identifying the participant of the study on component-based software product lines (SPL). For this purpose, we collect the participant's personal data, general and specific background.

Personal Data

1. Full name: _____
2. Highest education level: () High school () BS () MSc () PhD () Postdoc ()
3. Years of software development: _____
4. Years of component-based SPL development: _____
5. Number of component-based SPLs that you have implemented: _____
6. Are you currently working in a software development company? () Yes () No

General Background

7. How experienced are you with the following component-based mechanisms?
 - a. Components: () high () medium () low () none
 - b. Frameworks: () high () medium () low () none
 - c. Plug-in architectures: () high () medium () low () none
 - d. Aspect-oriented programming: () high () medium () low () none
 - e. Feature-oriented programming: () high () medium () low () none
8. How do you classify your level of skill with respect to the following techniques?
 - a. SPL development

() High	() low
() medium	() none
 - b. Component-based SPL development

() High	() low
() medium	() none

c. Java programming language

- | | |
|---------------------------------|-------------------------------|
| <input type="checkbox"/> High | <input type="checkbox"/> low |
| <input type="checkbox"/> Medium | <input type="checkbox"/> none |

d. Feature model design

- | | |
|---------------------------------|-------------------------------|
| <input type="checkbox"/> high | <input type="checkbox"/> low |
| <input type="checkbox"/> medium | <input type="checkbox"/> None |

e. Architectural design

- | | |
|---------------------------------|-------------------------------|
| <input type="checkbox"/> High | <input type="checkbox"/> low |
| <input type="checkbox"/> Medium | <input type="checkbox"/> none |

f. Design problem identification

- | | |
|---------------------------------|-------------------------------|
| <input type="checkbox"/> high | <input type="checkbox"/> low |
| <input type="checkbox"/> medium | <input type="checkbox"/> none |

g. Code smell identification

- | | |
|---------------------------------|-------------------------------|
| <input type="checkbox"/> high | <input type="checkbox"/> low |
| <input type="checkbox"/> medium | <input type="checkbox"/> none |

9. Consider the SPL that you have implemented and we aim to analyze in this study. Which programming tasks you have been involved during SPL development?

- | | |
|--|--|
| <input type="checkbox"/> Architectural design | <input type="checkbox"/> Extension of existing SPL (e.g., adding a new feature or component) |
| <input type="checkbox"/> Implementation from scratch (novel SPL) | <input type="checkbox"/> Maintenance of existing SPL (e.g., refactoring or bug fixing) |

Specific Background

10. What types of code smells you know? (no need for naming the smells, just state in what context it occurs)

11. Which of the following code smells do you know?

- | | |
|---|---|
| <input type="checkbox"/> Large Class (aka God Class, Brain Class) | <input type="checkbox"/> Intensive Coupling |
|---|---|

- | | |
|---|---|
| <input type="checkbox"/> Feature Envy | <input type="checkbox"/> Refused Parent Bequest |
| <input type="checkbox"/> Long Parameter List | <input type="checkbox"/> Shotgun Surgery |
| <input type="checkbox"/> Data Class | <input type="checkbox"/> Traditional Breaker |
| <input type="checkbox"/> Long Method (Brain Method) | <input type="checkbox"/> Type Checking |
| <input type="checkbox"/> Disperse Coupling | <input type="checkbox"/> ... |

12. What types of design problem you know? (no need for naming the problem, just state in what context it occurs)

13. Which of the following design problems do you know?

- | | |
|--|--|
| <input type="checkbox"/> Ambiguous Interface | <input type="checkbox"/> Fat Interface |
| <input type="checkbox"/> Component Overload | <input type="checkbox"/> Overused Interface |
| <input type="checkbox"/> Connector Envy | <input type="checkbox"/> Scattered Parasitic Functionality |
| <input type="checkbox"/> Extraneous Adjacent Connector | |