

VisuFlow User Study - Questionnaire

Q6 to **Q15** are questions from the System Usability Scale [B⁺96] for Coding Environment 1. **Q16** to **Q25** are the same questions for Coding Environment 2. **Q32** to **Q35** are Net Promoter Scores [Rei03].

Q1: How long have you been writing static code analysis?

- Type: Single-answer question.
- Possible choices: [< 1 years; 1-2 years; 2-5 years; 5-10 years; > 10 years]
- Mandatory.

Q2: Which coding environment do you primarily use (name of the IDE or text editor)?

- Type: Free-text field.
- Mandatory.

Q3: How familiar are you with Eclipse?

- Type: Scale from 0 (Never heard of) to 10 (Expert).
- Mandatory.

Q4: How familiar are you with data-flow analysis?

- Type: Scale from 0 (Never heard of) to 10 (Expert).
- Mandatory.

Q5: How familiar are you with Soot?

- Type: Scale from 0 (Never heard of) to 10 (Expert).
- Mandatory.

Q6: If I had to do the task frequently, I think that I would use Coding Environment 1 frequently.

- Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).
- Mandatory.

Q7: I found Coding Environment 1 unnecessarily complex.

- Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).
- Mandatory.

Q8: I found Coding Environment 1 easy to use.

- Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).
- Mandatory.

Q9: I would need the support of a technical person to use Coding Environment 1.

- Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).
- Mandatory.

Q10: I found the various functions of Coding Environment 1 well integrated.

- Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).
- Mandatory.

Q11: I thought there was too much inconsistency in Coding Environment 1.

- Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q12: I would imagine that most people would learn to use Coding Environment 1 very quickly.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q13: I found Coding Environment 1 very cumbersome to use.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q14: I felt confident using Coding Environment 1.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q15: I needed to learn a lot of things before I could get going with Coding Environment 1.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q16: If I had to do the task frequently, I think that I would use Coding Environment 2 frequently.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q17: I found Coding Environment 2 unnecessarily complex.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q18: I found Coding Environment 2 easy to use.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q19: I would need the support of a technical person to use Coding Environment 2.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q20: I found the various functions of Coding Environment 2 well integrated.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q21: I thought there was too much inconsistency in Coding Environment 2.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q22: I would imagine that most people would learn to use Coding Environment 2 very quickly.

– Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).

– Mandatory.

Q23: I found Coding Environment 2 very cumbersome to use.

- Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).
- Mandatory.

Q24: I felt confident using Coding Environment 2.

- Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).
- Mandatory.

Q25: I needed to learn a lot of things before I could get going with Coding Environment 2.

- Type: Scale from 0 (Strongly disagree) to 5 (Strongly agree).
- Mandatory.

Q26: In general, errors were easier to understand with:

- Type: Single-answer question.
- Possible choices: [Coding Environment 1; Coding Environment 2; Neutral]
- Mandatory.

Q27: In general, errors were easier to fix with:

- Type: Single-answer question.
- Possible choices: [Coding Environment 1; Coding Environment 2; Neutral]
- Mandatory.

Q28: I fixed more errors with:

- Type: Single-answer question.
- Possible choices: [Coding Environment 1; Coding Environment 2; Neutral]
- Mandatory.

Q29: In general, I had a better grasp on the analysis code with:

- Type: Single-answer question.
- Possible choices: [Coding Environment 1; Coding Environment 2; Neutral]
- Mandatory.

Q30: In general, I had a better grasp on the analysis code with:

- Type: Single-answer question.
- Possible choices: [Coding Environment 1; Coding Environment 2; Neutral]
- Mandatory.

Q31: In general, I had a better grasp on the application code with:

- Type: Single-answer question.
- Possible choices: [Coding Environment 1; Coding Environment 2; Neutral]
- Mandatory.

Q32: How much would you recommend Coding Environment 1 over Coding Environment 2 to a friend for the type of task you performed?

- Type: Scale from 0 (Not at all) to 10 (Go for it!).
- Mandatory.

Q33: How much would you recommend Coding Environment 2 over Coding Environment 1 to a friend for the type of task you performed?

- Type: Scale from 0 (Not at all) to 10 (Go for it!).
- Mandatory.

Q34: How much would you recommend Coding Environment 1 over your own coding environment to a friend for the type of task you performed?

- Type: Scale from 0 (Not at all) to 10 (Go for it!).
- Mandatory.

Q35: How much would you recommend Coding Environment 2 over your own coding environment to a friend for the type of task you performed?

- Type: Scale from 0 (Not at all) to 10 (Go for it!).
- Mandatory.

Q36: Describe your coding environment when writing static analysis. What do you typically use (software, favourite features)?

- Type: Free-text field.

Q37: Which features of Coding Environment 1 would you like to have in your current coding environment?

- Type: Free-text field.
- Mandatory.

Q38: Which features of Coding Environment 2 would you like to have in your current coding environment?

- Type: Free-text field.
- Mandatory.

Q39: In your opinion, which task(s) would Coding Environment 1 be best suited for?

- Type: Free-text field.
- Mandatory.

Q40: In your opinion, which task(s) would Coding Environment 2 be best suited for?

- Type: Free-text field.
- Mandatory.

Q41: Would you change anything about the Coding Environments? Other comments?

- Type: Free-text field.

References

- [B⁺96] John Brooke et al. SUS-A quick and dirty usability scale. *Usability Evaluation in Industry*, 189(194):4–7, 1996.
- [Rei03] Frederick F Reichheld. The one number you need to grow. *Harvard Business Review*, 81(12):46–55, 2003.