

End survey

Section 1:

How much experience do you have with Java development? (in years)

How much experience do you have with Android development? (in years)

How much experience do you have using static analysis tools? (in years)

If you have already used static analysis tools, which ones?

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Section 2:

In general, I think that I would use frequently

Tool 1: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Tool 2: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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I found unnecessarily complex

Tool 1: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Tool 2: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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I found easy to use

Tool 1: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Tool 2: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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I would need the support of a technical person to use

Tool 1: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Tool 2: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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I found the various functions of well integrated

Tool 1: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Tool 2: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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I thought there was too much inconsistency in

Tool 1: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Tool 2: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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I would imagine that most people would learn to use very quickly

Tool 1: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Tool 2: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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I found very cumbersome to use

Tool 1: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Tool 2: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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I felt confident using

Tool 1: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Tool 2: Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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Section 3:

With, the UI was blocked when the analysis was running

Tool 1 Tool 2

This made it easier to correct data leaks

Strongly disagree Disagree Neutral Agree Strongly agree

Why?

With, the analysis was triggered with a button

Tool 1 Tool 2

With, the analysis was triggered on build

Tool 1 Tool 2

I preferred the tool to be triggered

with a button on build

Why?

After I corrected a warning, I had to wait longer to get an update with:

Tool 1 Tool 2

I noticed that with, the warnings changed as I was editing the code

Tool 1 Tool 2 Neither of the tools

I felt comfortable with this system

Strongly disagree Disagree Neutral Agree Strongly agree

Why?

Section 4:

In general, warnings were easier to understand with:

Tool 1 Tool 2 Neutral

In general, warnings were easier to correct with:

Tool 1 Tool 2 Neutral

In general, warnings were faster to understand with:

Tool 1 Tool 2 Neutral

In general, warnings were faster to correct with:

Tool 1 Tool 2 Neutral

In general, I had a better grasp on the application code while using:

Tool 1 Tool 2 Neutral

To correct data leaks, I would rather use:

Tool 1 Tool 2 Neutral

How likely is it you would recommend Tool 1 over Tool 2 to a friend?

0 1 2 3 4 5 6 7 8 9 10

How likely is it you would recommend Tool 2 over Tool 1 to a friend?

0 1 2 3 4 5 6 7 8 9 10

Tool 1: Positive points:

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Negative points:

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Tool 2: Positive points:

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Negative points:

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Section 5:

Which tasks would be best suited for?

Tool 1:

Tool 2:

Would you change anything about the tools? Other comments?

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Survey results

		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18
UTILS	Tool 1 =	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH
	Tool 2 =	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base	CHEETAH	Base
Section 1	Java EXP	~10	~10	1	10	4	2+	~12	5	6.5	3	10	2	12	0 (4 yrs c#)	5	10		10
	Android EXP (years)	0.1	0	0	2	~0		0	2	4	0	0	0.5	0.25	0	Basic concepts	0		0
	Static analysis exp (years)	3	0	0	0	0	.5 - 1	0	0	2.5 months	0.5	0	0.5	0	3 months	0	0		4
Section 2 - Base	Q1+	3	5	4	4	3	2	2	3	3	4	3	3	4	4	4	3		4
	Q2-	3	1	4	1	3	2	2	4	4	2	4	2	3	2	3	5		3
	Q3+	2	4	4	4	3	4	4	4	4	4	3	4	4	5	2	2		4
	Q4-	2	2	2	1	3	2	2	1	4	3	2	2	2	1	3	4		4
	Q5+	4	4	4	3	4	3	3	3	2	4	3	3	4	4	3	3		2
	Q6-	3	2	3	1	2	2	4	1	3	3	3	1	2	1	3	3		4
	Q7+	4	4	3	4	5	5	3	4	2	4	4	5	5	5	4	2		3
	Q8-	2	2	2	1	2	5	2	4	4	2	3	2	3	1	3	4		4
	Q9+	1	4	3	4	3	2	3	4	2	4	4	4	4	5	2	2		4
Normalized Base	Q1	2	4	3	3	2	1	1	2	2	3	2	2	3	3	3	2		3
	Q2	2	4	1	4	2	3	3	1	1	3	1	3	2	3	2	0		2
	Q3	1	3	3	3	2	3	3	3	3	3	2	3	3	4	1	1		3
	Q4	3	3	3	4	2	3	3	4	1	2	3	3	3	4	2	1		1
	Q5	3	3	3	2	3	2	2	2	1	3	2	2	3	3	2	2		1
	Q6	2	3	2	4	3	3	1	4	2	2	2	4	3	4	2	2		1
	Q7	3	3	2	3	4	4	2	3	1	3	3	4	4	4	3	1		2
	Q8	3	3	3	4	3	0	3	1	1	3	2	3	2	4	2	1		1
	Q9	0	3	2	3	2	1	2	3	1	3	3	3	3	4	1	1		3
Base ~SUS Score		19	29	22	30	23	20	20	23	13	25	20	27	26	33	18	11		17
Section 2 - CHEETAH	Q1+	4	4	4	4	4	4	5	4	4	5	4	4	3	4	4	4		4
	Q2-	3	1	3	1	3	2	1	2	1	2	2	2	3	2	3	4		3
	Q3+	2	4	4	4	4	4	4	4	1	4	5	5	4	4	2	2		4
	Q4-	2	2	2	1	3	2	2	1	3	3	2	2	2	3	3	4		4
	Q5+	5	4	4	3	3	4	4	4	4	4	4	4	4	5	3	3		2
	Q6-	3	2	3	1	4	2	1	1	2	2	3	1	2	1	3	3		3
	Q7+	4	4	4	5	5	5	5	4	4	4	5	5	4	5	4	2		4
	Q8-	2	2	2	1	2	3	1	3	2	2	2	1	3	2	3	3		2
	Q9+	1	4	4	4	3	4	4	4	4	5	5	5	3	4	2	2		4
Normalized CHEETAH	Q1	4	3	3	3	3	3	4	3	3	4	3	3	2	3	3	3		3
	Q2	2	4	2	4	2	3	4	3	4	3	3	3	2	3	2	1		2
	Q3	1	3	3	3	3	3	3	3	0	3	4	4	3	3	1	1		3
	Q4	3	3	3	4	2	3	3	4	2	2	3	3	3	2	2	1		1
	Q5	4	3	3	2	2	3	3	3	3	3	3	3	3	4	2	2		1
	Q6	2	3	2	4	1	3	4	4	3	3	2	4	3	4	2	2		2
	Q7	3	3	3	4	4	4	4	3	3	3	4	4	3	4	3	1		3
	Q8	3	3	3	4	3	2	4	2	3	3	3	4	2	3	2	2		3
	Q9	0	3	3	3	2	3	3	3	3	4	4	4	2	3	1	1		3
CHEETAH ~SUS Score		22	28	25	31	22	27	32	28	24	28	29	32	23	29	18	14		21
Section 3	UI Block made it easier	2	2	4	2	3	1	1	1	1	5	1	3		4				
	I preferred trigger on...	Build	Build	Build	Both (depends)	Build	Build	Build	Build	Build	Build	Build	Build	Button	Button	Button	Build		Button
	I had to wait longer with	Base	Base	CHEETAH		Base	Base	Base	Base		Base	Base	CHEETAH	CHEETAH	CHEETAH		Base		Base
	Noticed warnings change	Neither	CHEETAH	Neither	Neither	Neither	CHEETAH	Neither	Neither	Neither	CHEETAH	Neither	Neither	Neither	Neither	CHEETAH	Neither		Neither
	I felt comfortable	3	4	4		3	4		4	4	4	4	4		5	Neutral	3		Neutral
Section 4	Easier to understand	Neutral	CHEETAH	CHEETAH	Neutral	Base	Neutral	CHEETAH	Neutral	CHEETAH	CHEETAH	CHEETAH	Neutral	Neutral	Neutral	Neutral	CHEETAH		Neutral
	Easier to correct	Neutral	CHEETAH	CHEETAH			CHEETAH	CHEETAH	Neutral	CHEETAH	CHEETAH	CHEETAH	Neutral	Neutral	Neutral	Neutral	CHEETAH		CHEETAH
	Faster to understand				Neutral	CHEETAH	Neutral	Neutral	CHEETAH	CHEETAH	CHEETAH	CHEETAH	Neutral	Neutral	Neutral	Neutral	Neutral		CHEETAH
	Faster to correct					CHEETAH	CHEETAH	CHEETAH	CHEETAH	CHEETAH	CHEETAH	CHEETAH	Neutral	Base	Neutral	Neutral	CHEETAH		CHEETAH
	Better grasp on app				Neutral	CHEETAH	CHEETAH	CHEETAH	Neutral	CHEETAH	Neutral	Neutral	Neutral	CHEETAH	Neutral	Neutral	Neutral		Neutral
	Would rather use	CHEETAH	CHEETAH	CHEETAH	Neutral	Neutral	CHEETAH	CHEETAH	CHEETAH	CHEETAH	CHEETAH	CHEETAH	CHEETAH	Neutral	Neutral	Neutral	CHEETAH		Neutral
NPS	CHEETAH over Base	10	8	9	No answe	7	8	10	10	8	8	8	8	3	8	0	6		7
	Base over CHEETAH	0	5	4	No answe	3	0	0	0	2	4	3	5	3	8	0	0		6

Interview questions, sorted thematically

Introductory questions

What did you think of the tools in general?

Did you notice differences between the two tools? Which ones?

Performance

Did you think you performed better with Tool 1 or Tool 2?

What do you mean by “better”? Faster? More warnings solved? Detail per tool.

Ordering system

Did you notice any kind of sorting system in the overview view for any of the tools?

If yes, which one?

Did the sorting system help or hurt?

With which criteria do the participants usually sort this kind of results?

Waiting times

Did you notice a difference between the waiting times when using Tool 1 compared to Tool 2?

Specify waiting times. How much in seconds for each tool, and to which events does that correspond to (from when they saved to when they saw the first update, or something else)?

Was waiting a problem? Why?

Strategies to use the tools

If you had to work with Tool 1 for a few months, would you have a particular strategy for using it (when to use it, how often)?

If you had to work with Tool 2 for a few months, would you have a particular strategy for using it?

Interruption

(Ask this towards the end of the interview, if the topic has not been brought up by the participant yet)

How interruptive would you say Tool 1 was in your development task?

How interruptive would you say Tool 2 was in your development task?

What kind of interruptions would you accept while developing?

Discuss blocking interface and quick fixes

Personal experience

Did you ever use any static analysis tool or a tool that is similar to Tool 1 or Tool 2?

If yes, which ones? Explain how they work and what they like or not about those tools?

UI questions

(Ask this towards the end of the interview, if the topic has not been brought up by the participant yet)

Which UI differences did you notice between the two tools? (Go into UI details)

Was the greying effect helpful? In which cases? Why? Why not?

Towards the end of the interview, ask participant if they have any comments, and comment on their notable behaviours during the study. Can prompt interesting discussions.