Survey on Code Smells
PreTest – Descriptive statistics of responses

Rating scale used

Answer	Rating value
Strong agreement	1
Agreement	2
Weak agreement	3
Weak disagreement	4
Disagreement	5
Strong disagreement	6

Part 2 - Code smells detection techniques

Q2.1 - SLR FINDING: The most frequently used code smells detection techniques are based on rule-based approaches.
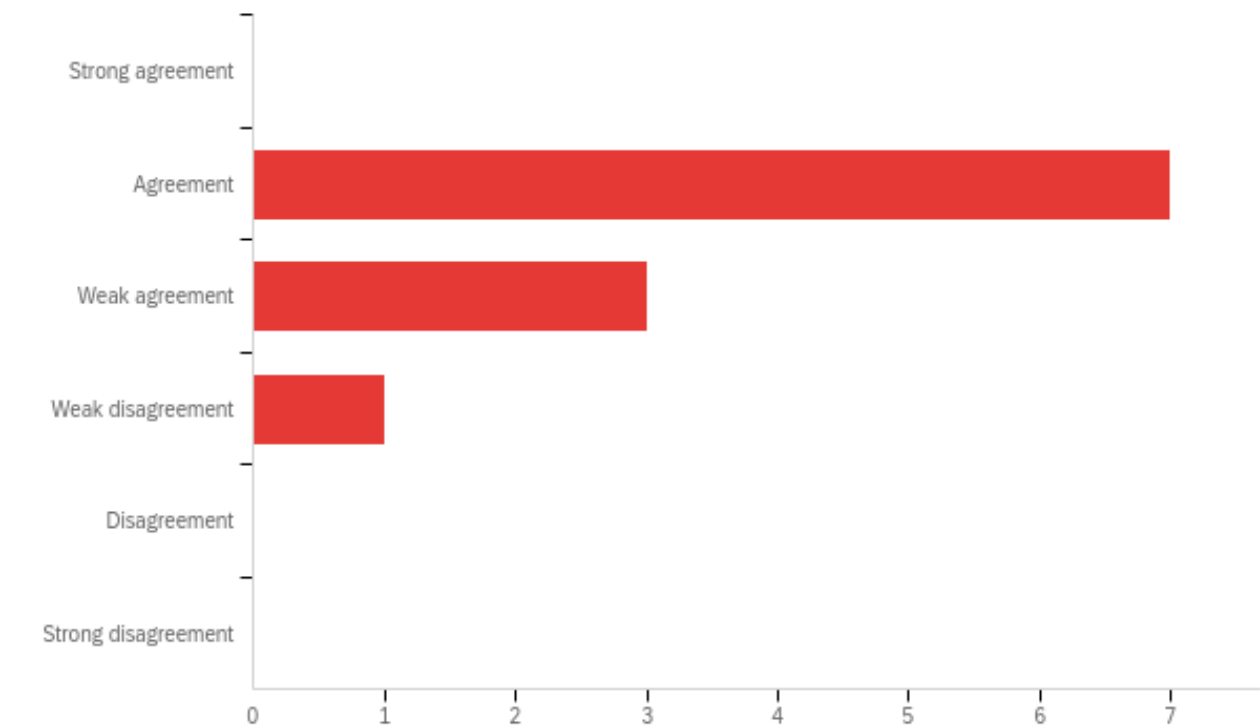
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	SLR FINDING: The most frequently used code smells detection techniques are based on rule-based approaches.	2.00	4.00	2.45	0.66	0.43	11

#	Answer	%	Count
1	Strong agreement	0.00%	0
2	Agreement	63.64%	7
3	Weak agreement	27.27%	3
4	Weak disagreement	9.09%	1

5	Disagreement	0.00%	0
6	Strong disagreement	0.00%	0
	Total	100%	11

Q2.2 - How do you rate your confidence degree while assessing the previous finding?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you rate your confidence degree while assessing the previous finding?	0.70	3.50	2.06	0.95	0.91	9

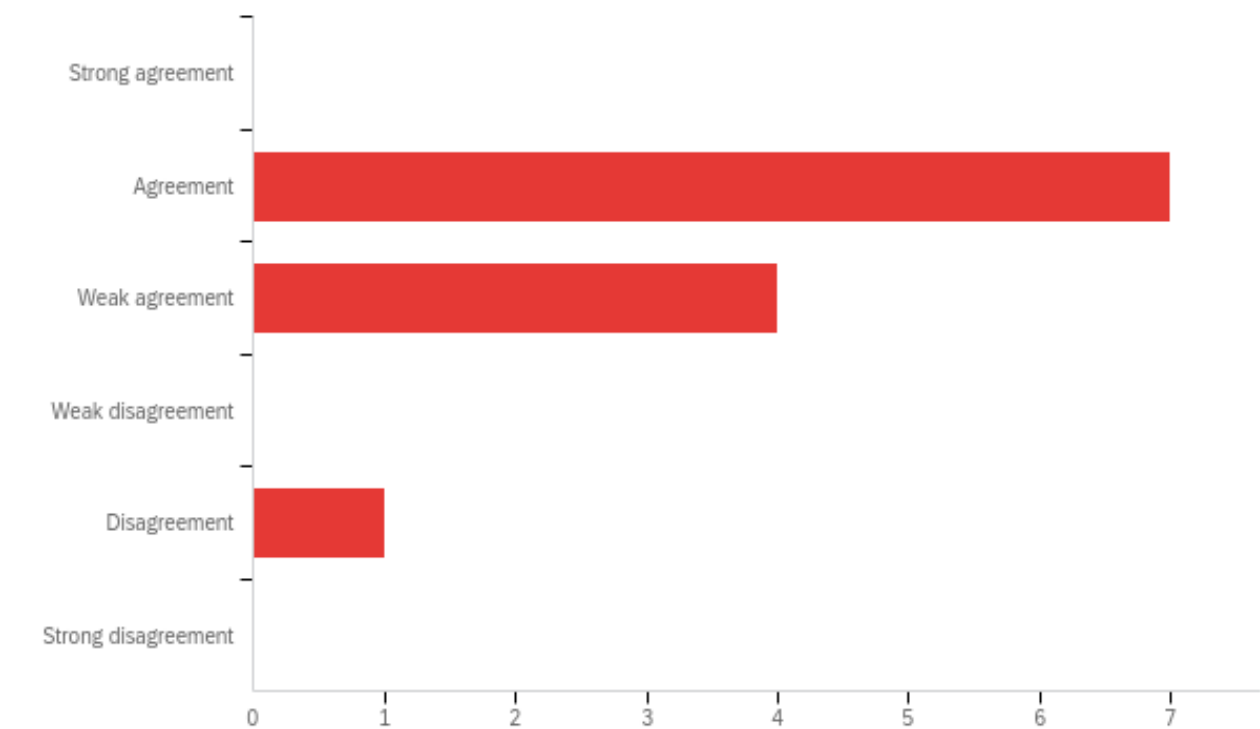## Q2.3 - Optional justification or comments

Optional justification or comments
I am not an expert in code smells. I am an informed outsider
Code smells are often detected using code metrics.
What do you mean, "rule"? They are a means, not an end. Here, the motivation is cognitive.

Q2.4 - SLR FINDING: Very few code smells detection studies provide the oracles used.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	SLR FINDING: Very few code smells detection studies provide the oracles used.	2.00	5.00	2.58	0.86	0.74	12

#	Answer	%	Count
1	Strong agreement	0.00%	0
2	Agreement	58.33%	7
3	Weak agreement	33.33%	4
4	Weak disagreement	0.00%	0
5	Disagreement	8.33%	1
6	Strong disagreement	0.00%	0
	Total	100%	12

Q2.5 - How do you rate your confidence degree while assessing the previous finding?

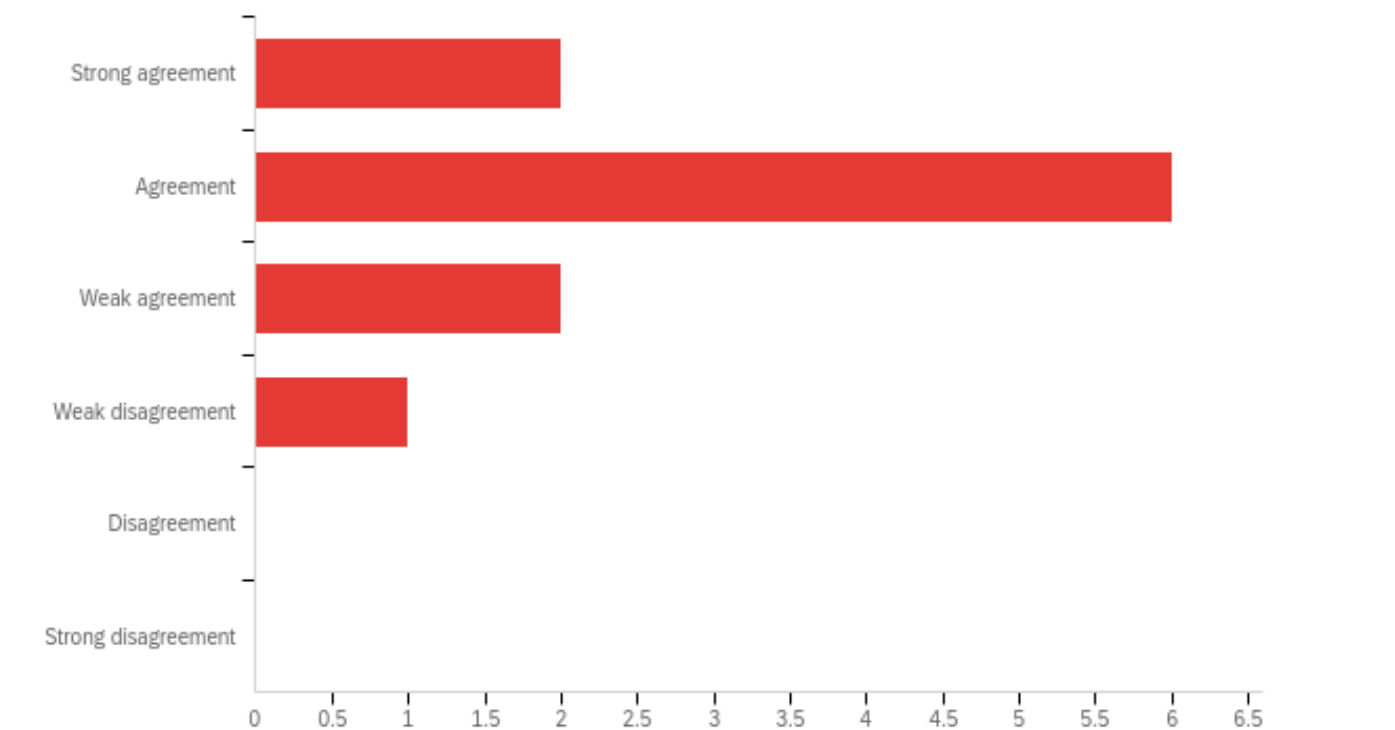| #	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you rate your confidence degree while assessing the previous finding?	0.00	4.00	2.10	1.37	1.89	9

Q2.6 - Optional justification or comments

Optional justification or comments
I agree: very few sw engineering studies provide oracles used.
Damn it... what do you mean, "oracles"?!
I didn't assess the studies.

Q2.7 - SLR FINDING: The most often detected code smells are God Class, Feature Envy and Long Method.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	SLR FINDING: The most often detected code smells are God Class, Feature Envy and Long Method.	1.00	4.00	2.18	0.83	0.69	11

#	Answer	%	Count
1	Strong agreement	18.18%	2
2	Agreement	54.55%	6
3	Weak agreement	18.18%	2
4	Weak disagreement	9.09%	1
5	Disagreement	0.00%	0
6	Strong disagreement	0.00%	0
	Total	100%	11

Q2.8 - How do you rate your confidence degree while assessing the previous finding?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you rate your confidence degree while assessing the previous finding?	0.00	4.00	2.66	1.32	1.74	9

Q2.9 - Optional justification or comments

| Optional justification or comments |
|---|
| No string opinion in this one! |
| There is also Duplicated Code, probably ahead of those mentioned |
| Would expect "duplicate code" to be more pervasive |

Part 3 - Code smells detection effectiveness

Q3.1 - SLR FINDING: In the detection of simpler code smells (e.g. Long Method or God Class), the achieved precision and recall of detection techniques can be very high (up to 100%).
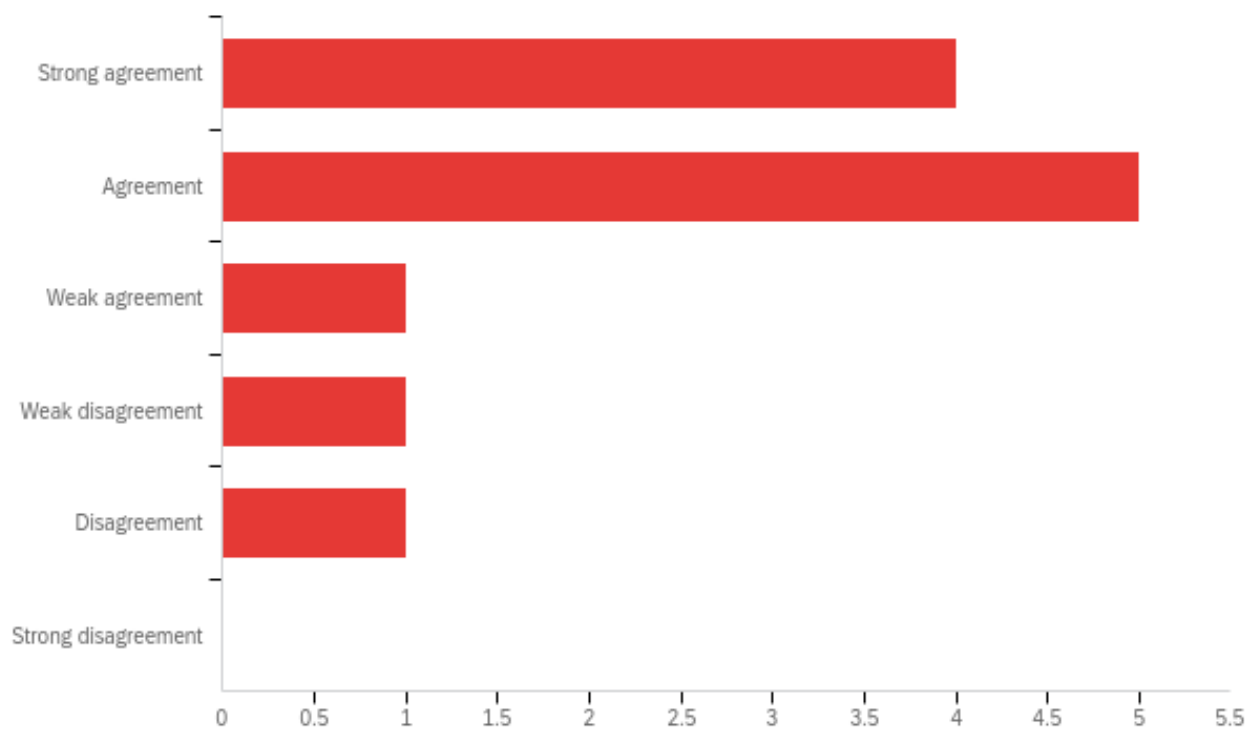
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	SLR FINDING: In the detection of simpler code smells (e.g. Long Method or God Class), the achieved precision and recall of detection techniques can be very high (up to 100%).	1.00	5.00	2.17	1.21	1.47	12

#	Answer	%	Count
1	Strong agreement	33.33%	4
2	Agreement	41.67%	5
3	Weak agreement	8.33%	1

4	Weak disagreement	8.33%	1
5	Disagreement	8.33%	1
6	Strong disagreement	0.00%	0
	Total	100%	12

Q3.2 - How do you rate your confidence degree while assessing the previous finding?

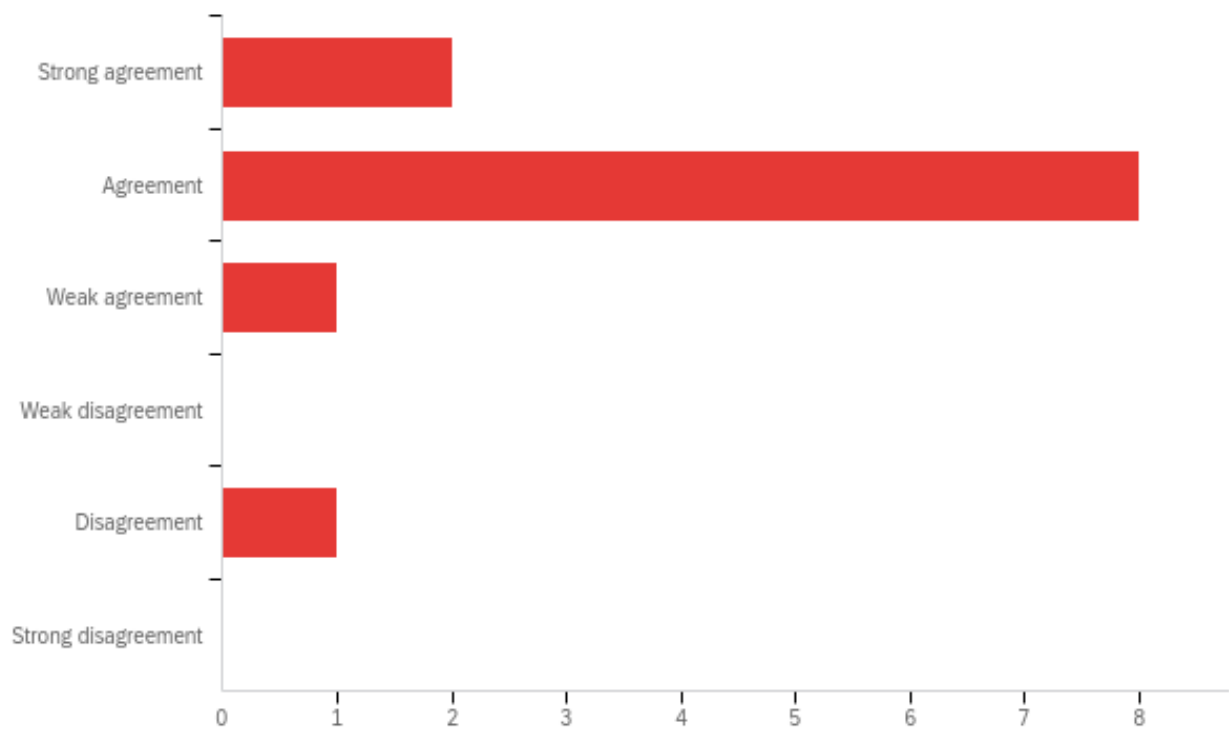| #	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you rate your confidence degree while assessing the previous finding?	0.00	4.00	2.76	1.07	1.15	9

Q3.3 - Optional justification or comments

Optional justification or comments
In fact, simpler code smells are easy to detect.
Agree but will call them "simple to calculate" rather than just simple.

Q3.4 - SLR FINDING: When the complexity of code smells is greater (e.g. Divergent Change or Shotgun Surgery), the precision and recall in detection are much lower than in simpler code smells.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	SLR FINDING: When the complexity of code smells is greater (e.g. Divergent Change or Shotgun Surgery), the precision and recall in detection are much lower than in simpler code smells.	1.00	5.00	2.17	0.99	0.97	12

#	Answer	%	Count
1	Strong agreement	16.67%	2
2	Agreement	66.67%	8
3	Weak agreement	8.33%	1
4	Weak disagreement	0.00%	0
5	Disagreement	8.33%	1

6	Strong disagreement	0.00%	0
	Total	100%	12

Q3.5 - How do you rate your confidence degree while assessing the previous finding?

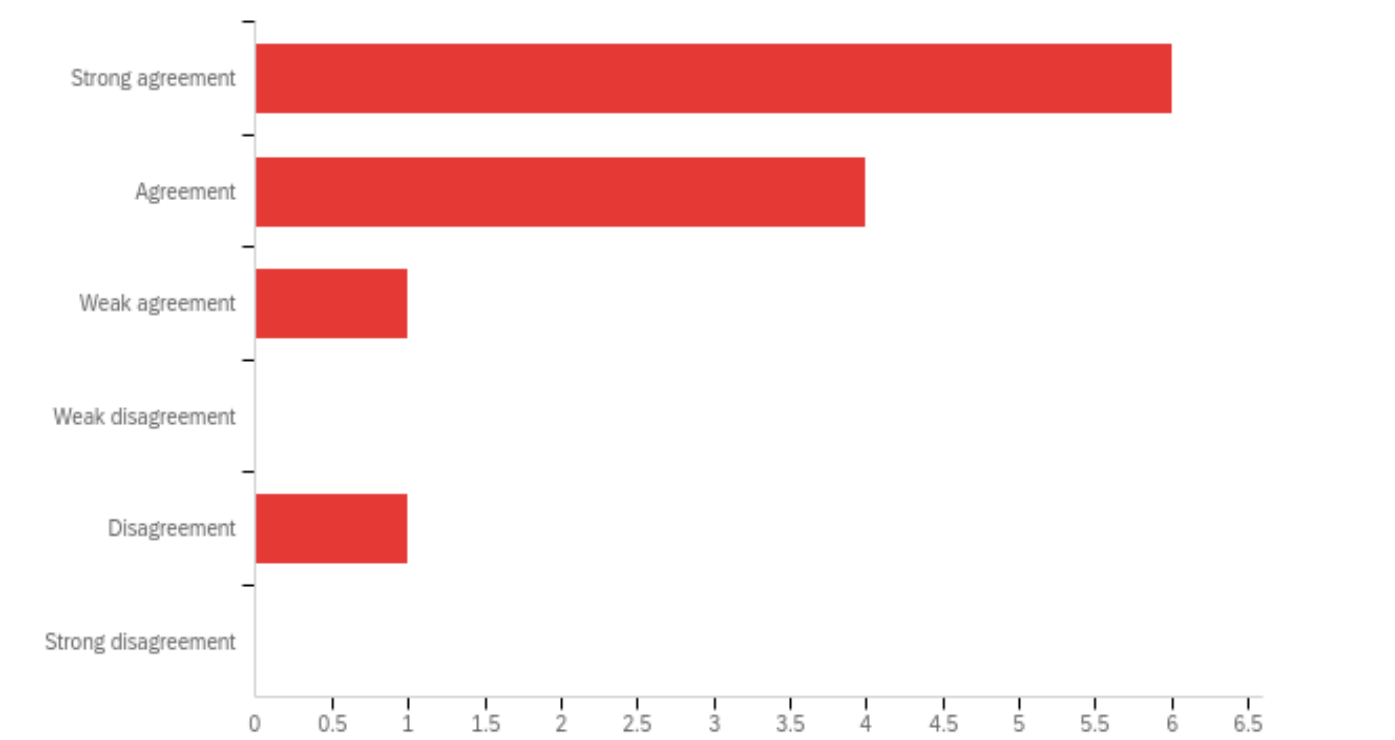| #	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you rate your confidence degree while assessing the previous finding?	0.00	3.50	2.13	1.05	1.11	8

Q3.6 - Optional justification or comments

Optional justification or comments

I would say: the precision is lower than in simpler code smells.

It is not so much, complexity, but vagueness

Q3.7 - SLR FINDING: There are few oracles shared and publicly available. The existence of a shared and collaborative oracle would be important for the improvement of code smells detection processes.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	SLR FINDING: There are few oracles shared and publicly available. The existence of a shared and collaborative oracle would be important for the improvement of code smells detection processes.	1.00	5.00	1.83	1.14	1.31	12

#	Answer	%	Count
1	Strong agreement	50.00%	6
2	Agreement	33.33%	4
3	Weak agreement	8.33%	1
4	Weak disagreement	0.00%	0
5	Disagreement	8.33%	1

6	Strong disagreement	0.00%	0
	Total	100%	12

Q3.8 - How do you rate your confidence degree while assessing the previous finding?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you rate your confidence degree while assessing the previous finding?	0.00	4.00	2.93	1.27	1.62	7

Q3.9 - Optional justification or comments

Optional justification or comments
Making such software artifacts available to a collaborative community is very important/needed!
Assuming "oracle" means indicators, I say programmer's perceptions are more important
It would be nice to have the term "oracle" defined.

Part 4 - Code smells visualization

Q4.1 - SLR FINDING: The vast majority of code smells detection studies do not propose visualization features for their detection.
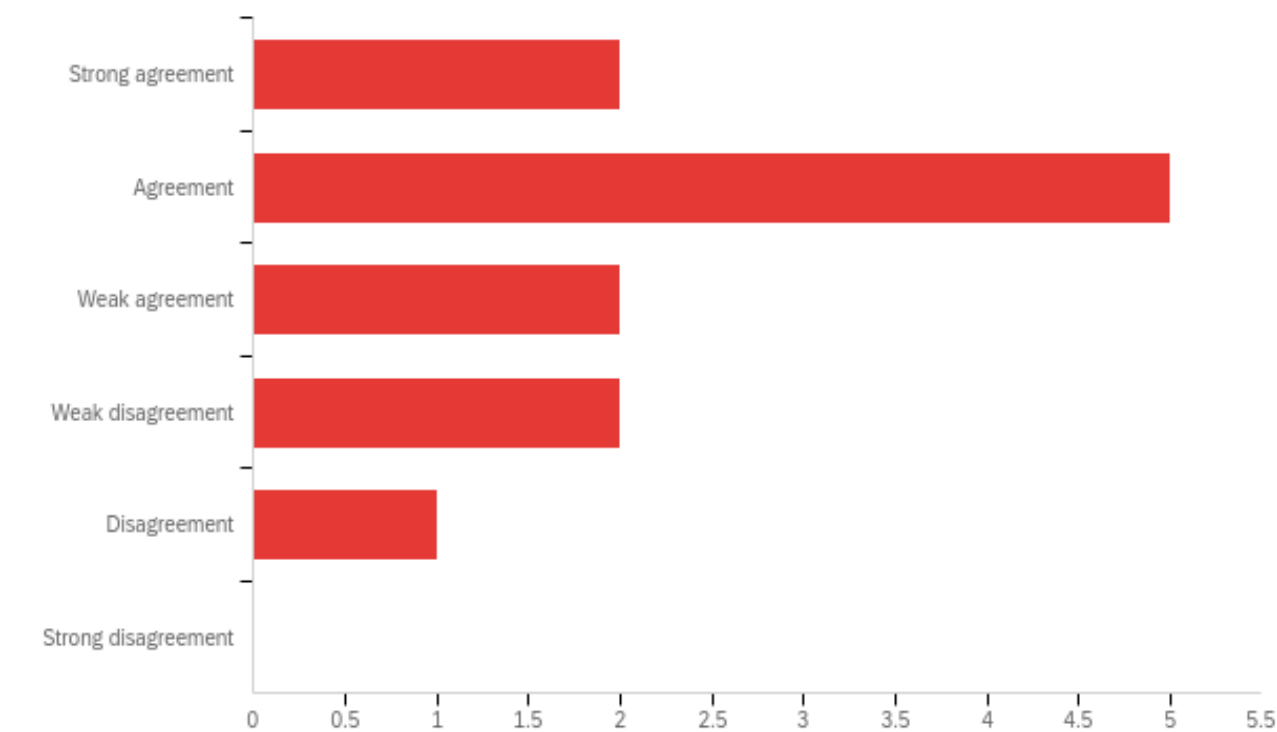
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	SLR FINDING: The vast majority of code smells detection studies do not propose visualization features for their detection.	1.00	5.00	2.58	1.19	1.41	12

#	Answer	%	Count
1	Strong agreement	16.67%	2
2	Agreement	41.67%	5
3	Weak agreement	16.67%	2
4	Weak disagreement	16.67%	2

5	Disagreement	8.33%	1
6	Strong disagreement	0.00%	0
	Total	100%	12

Q4.2 - How do you rate your confidence degree while assessing the previous finding?

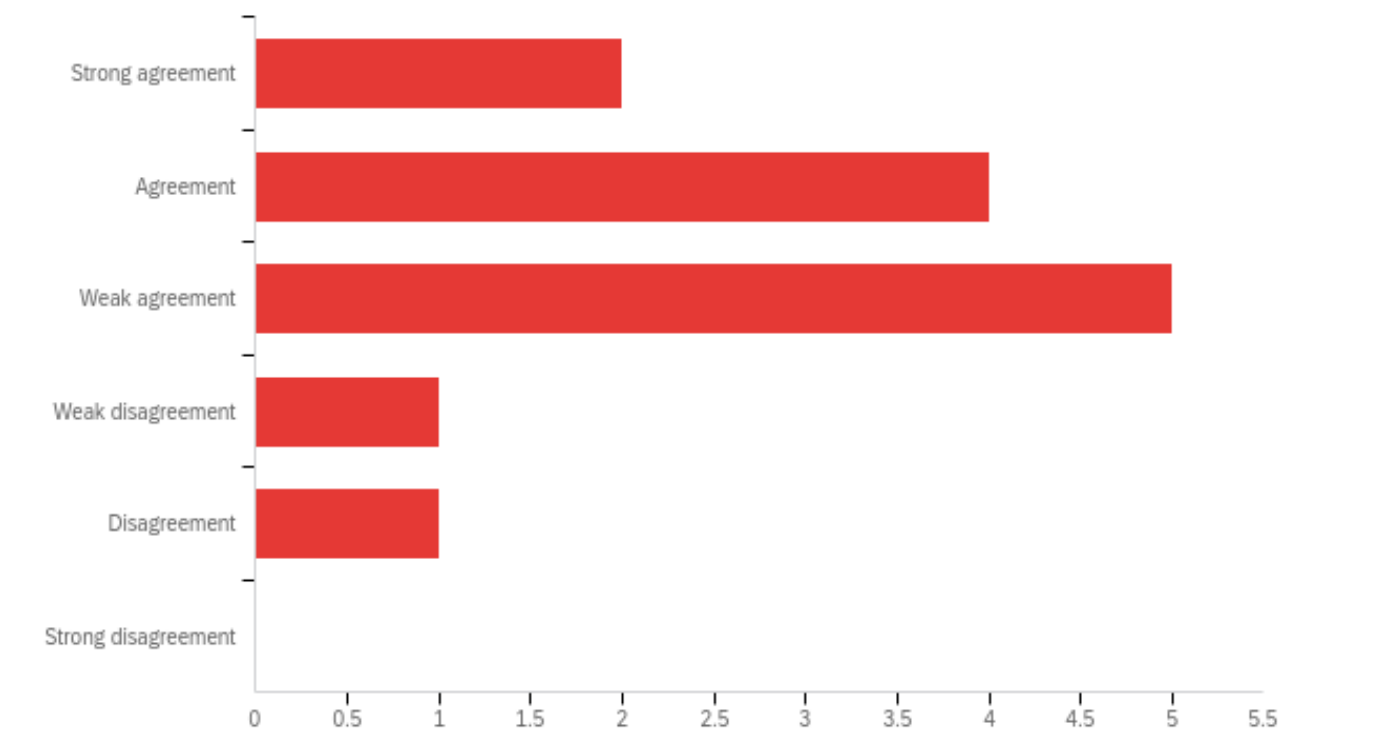| #	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you rate your confidence degree while assessing the previous finding?	0.00	4.00	2.52	1.30	1.68	9

Q4.3 - Optional justification or comments

Optional justification or comments
Most IDEs provide some form of identifying smells in the code.
Some tools do provide visualization - but they should provide more

Q4.4 - SLR FINDING: The vast majority of existing code smells visualization studies are not targeted to large software systems.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	SLR FINDING: The vast majority of existing code smells visualization studies are not targeted to large software systems.	1.00	5.00	2.62	1.08	1.16	13

#	Answer	%	Count
1	Strong agreement	15.38%	2
2	Agreement	30.77%	4
3	Weak agreement	38.46%	5
4	Weak disagreement	7.69%	1
5	Disagreement	7.69%	1
6	Strong disagreement	0.00%	0
	Total	100%	13

Q4.5 - How do you rate your confidence degree while assessing the previous finding?

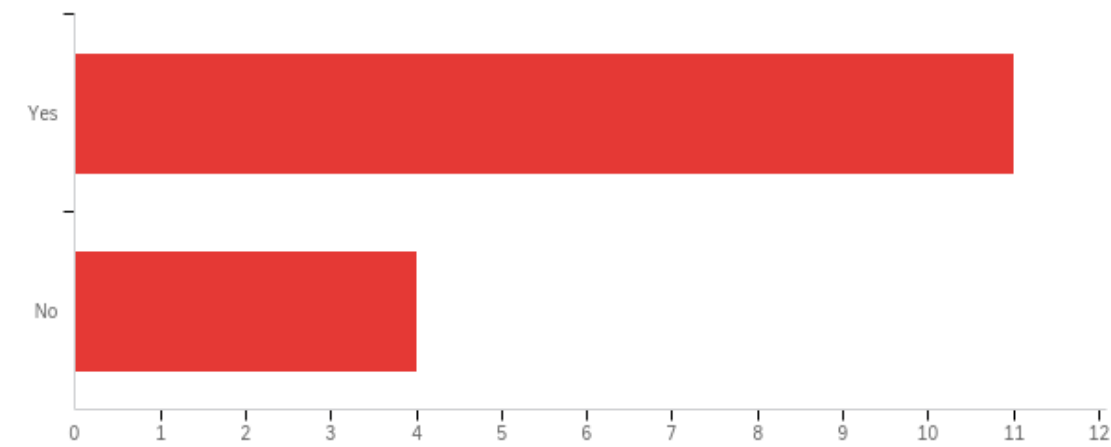| #	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How do you rate your confidence degree while assessing the previous finding?	0.00	3.50	1.93	1.17	1.38	9

Q4.6 - Optional justification or comments

Optional justification or comments
There is research working on large software repositories.
In some tools, you need to zoom into relatively small parts

Part 5 - Respondents' info

Q5.1 - OPTIONAL   Do you want to have first-hand access to the Systematic Literature Review?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	OPTIONAL Do you want to have first-hand access to the Systematic Literature Review?	1.00	2.00	1.27	0.44	0.20	15

#	Answer	%	Count
1	Yes	73.33%	11
2	No	26.67%	4
	Total	100%	15

Q5.2 - Please provide your Email address below.   NOTE: You will not be identified in any report that is produced using the information you have provided in this questionnaire and your email will not be used for any other purpose, except for sending you the SLR.

Email address

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