

Rationale for Code Commits Interview

Please answer the questions in your own words and provide as much detail as you feel is relevant to address each question. Some questions have choices. I will instruct you to choose the answer for the ones with choices.

Modern software is modified in packaged changes called **code commits** in revision control systems. In many occasions, software developers need to **examine code commits** for various purposes. Some of the main motivations for examining code commits are¹:

- Debugging
- Reverse engineering requirements
- **Understanding rationale (Why is the code this way?)**
- ...

In this study, we will discuss your **experience in understanding the rationale for code commits**. Please answer each question based on your experience and provide as much information as you feel is relevant to your answer.

1. Tell me about one time in which you **investigated a code commit** to understand its **rationale**.
 - a. **Why** did you **need to find** the rationale for that code commit?
 - b. **What** was **the rationale** for that code commit?

¹ Mihai Codoban, Sruti Srinivasa Ragavan, Danny Dig, and Brian Bailey. 2015. Software history under the lens: a study on why and how developers examine it. In Software Maintenance and Evolution (ICSME), 2015 IEEE International Conference on. IEEE, 1–10.

2. If you had to **divide rationale into components**, what are the components of rationale for code commits? Take as much time as you need.

Finding and Recording Rationale for Code Commits

7. What are your **strategies for finding** the rationale of code commits? Please include:
 - a. Your **steps** for finding rationale of code commits.
 - b. The **location** of which you find the rationale for code commits.
 - c. The **tools** you use to find the rationale for code commits.
 - d. The **rationale components** that fit every strategy.

8. When your strategy does not lead you to the rationale of code commits, what do you do?

9. In what **order** do you follow your **strategies**?

10. What would make your life easier in this process?

11. As a developer, what are your strategies for **keeping a record** of the rationale for your code commits? Please include:
- a. Your **steps** for recording rationale of code commits.
 - b. The **location** of which you record the rationale for code commits.
 - c. The **tools** you use to record the rationale for code commits.
 - d. The **rationale components** that fit every strategy.

12. During your software engineering activities, how **often** do you **record** ...

	Frequency of Recording					
	Almost Never	Rarely	Sometimes	Often	Almost Always	N/A
Rationale	0	0	0	0	0	0
Component						
Goal	0	0	0	0	0	0
Need	0	0	0	0	0	0
Location	0	0	0	0	0	0
Modifications	0	0	0	0	0	0
Alternatives	0	0	0	0	0	0
Selected alternative	0	0	0	0	0	0
Validation	0	0	0	0	0	0
Benefits	0	0	0	0	0	0
Costs	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

13. During your software engineering activities, which **frequency** best reflects how often you **sought**

...

	Frequency of Need					
	few times a year	multiple times a year	multiple times a month	multiple times a week	multiple times a day	N/A
Rationale	0	0	0	0	0	0
Component						
Goal	0	0	0	0	0	0
Need	0	0	0	0	0	0
Location	0	0	0	0	0	0
Modifications	0	0	0	0	0	0
Alternatives	0	0	0	0	0	0
Selected alternative	0	0	0	0	0	0
Validation	0	0	0	0	0	0
Benefits	0	0	0	0	0	0
Costs	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

14. During your software engineering activities (at any point in time), what is the **maximum frequency** with which you **sought** ...

	Max. Frequency of Need					
	few times a year	multiple times a year	multiple times a month	multiple times a week	multiple times a day	N/A
Rationale	0	0	0	0	0	0
Component						
Goal	0	0	0	0	0	0
Need	0	0	0	0	0	0
Location	0	0	0	0	0	0
Modifications	0	0	0	0	0	0
Alternatives	0	0	0	0	0	0
Selected alternative	0	0	0	0	0	0
Validation	0	0	0	0	0	0
Benefits	0	0	0	0	0	0
Costs	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

15. For the components of rationale for code commits that you seek, how **often** do you usually **find** ...

	Frequency of Finding					
	Almost Never	Rarely	Sometimes	Often	Almost Always	N/A
Rationale	0	0	0	0	0	0
Component						
Goal	0	0	0	0	0	0
Need	0	0	0	0	0	0
Location	0	0	0	0	0	0
Modifications	0	0	0	0	0	0
Alternatives	0	0	0	0	0	0
Selected alternative	0	0	0	0	0	0
Validation	0	0	0	0	0	0
Benefits	0	0	0	0	0	0
Costs	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

16. For the components of rationale for code commits that you seek, how **difficult** is it to **find** ...

	Difficulty of Finding					
	Very easy	Easy	Neutral	Difficult	Very difficult	N/A
Rationale	0	0	0	0	0	0
Component						
Goal	0	0	0	0	0	0
Need	0	0	0	0	0	0
Location	0	0	0	0	0	0
Modifications	0	0	0	0	0	0
Alternatives	0	0	0	0	0	0
Selected alternative	0	0	0	0	0	0
Validation	0	0	0	0	0	0
Benefits	0	0	0	0	0	0
Costs	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

17. How **important** is finding each **component** (for understanding the rationale for code commits)?

Component	Importance				
	I would easily know the rationale for code commits without finding this component	I would know the rationale for code commits without finding this component	I would better know the rationale for code commits when finding this component	It's hard to know the rationale for code commits without finding this component	I can't know the rationale for code commits without finding this component
Goal	0	0	0	0	0
Need	0	0	0	0	0
Location	0	0	0	0	0
Modifications	0	0	0	0	0
Alternatives	0	0	0	0	0
Selected alternative	0	0	0	0	0
Validation	0	0	0	0	0
Benefits	0	0	0	0	0
Costs	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

18. How important is understanding the rationale of code commits for the completion of your work?

- I **don't need** the rationale of code commits and I **can complete** my work without it
- I **don't need** the rationale of code commits but **it helps me complete** my work
- I **need** the rationale of code commits but I **can complete** my work without it
- I **really need** the rationale of code commits and I **struggle to complete** my work without it
- I **really need** the rationale of code commits and I **can not complete** my work without it

19. How much **time** do you **usually spend** when searching for the rationale of code commits?

- Less than 5 minutes
- 5-10 minutes
- 10-20 minutes
- 20-30 minutes
- More than 30 minutes
- I don't search for rationale

20. In the cases where it is hard to find the rationale of code commits, how much **time** do you **usually spend** searching for the rationale of code commits?

- Less than 5 minutes
- 5-10 minutes
- 10-20 minutes
- 20-30 minutes
- More than 30 minutes
- N/A

21. Is there anything else you want to tell me about the rationale for code commits?

22. Is there anyone you know who would participate in this study?

23. Will you be interested in disseminating a related survey to people who would participate?