

FIXING BUGS: OVERLOOKING THE OBVIOUS

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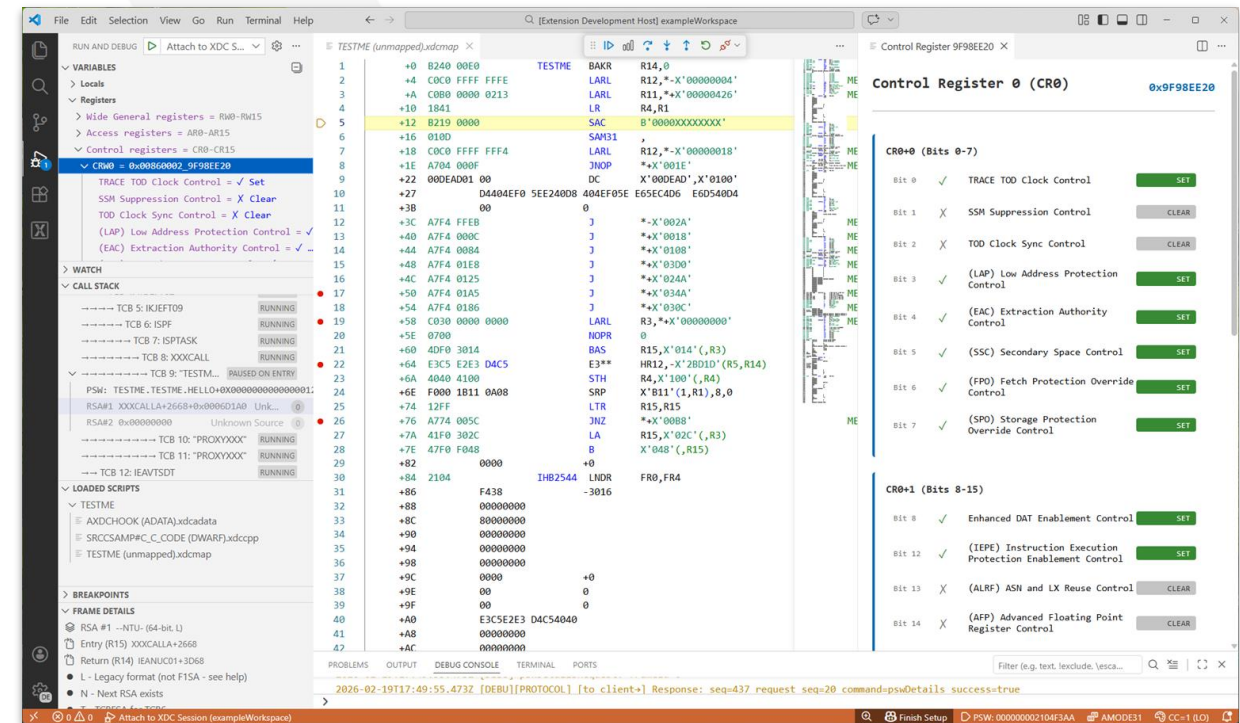


Topics

- The Blind Spots in Your Own Code
- Cognitive Biases: Why We Miss Our Own Bugs
- Mental Fatigue and Familiarity
- Practical Techniques to Break Free

The Blind Spots in Your Own Code

- What your brain sees vs. what you actually code
- Why you miss bugs that your colleague spots in seconds
- When we're too close to the code, we're blind to its problems



- | base/SRCLIST1.asm: 40752072 | | |
|-----------------------------|--|--------------------|
| 3608 |MVI.....MDSTR2-1,L'SSIBSSNM·L'TEXT..... | 11/02·Z12·28100000 |
| 3609 |SPACE·1..... | 11/02·Z12·28110000 |
| 3610 |MVI.....MDVARS,L'SSIBJBID.....L'JOBNUMBER·TEXT..... | 11/02·Z12·28120000 |
| 3611 |MVC.....MDVARS+1(L'SSIBJBID),SSIBJBID·JOBNUMBER·TEXT..... | 11/02·Z12·28130000 |
| 3612 |#TEST·SIZE=(L'MDVARS,GE,L'SSIBJBID+1)·FIT·CHECK..... | 11/02·Z12·28140000 |
| 3613 | LASDSSIZ·DS.....0H..... | 11/02·Z12·28150000 |

```

base/SRCLIST1.asm: Working Tree
3623 ..... MVI...MDSTR2-1,L'SSIBSSNM·L'TEXT.....11/02·Z12·28100000
3624 ..... SPACE·L·.....11/02·Z12·28110000
3625 ..... MVI...MDVARS,L'SSIBJBID·L'JOBNUMBER·TEXT.....11/02·Z12·28120000
3626 ..... MVC...MDVARS+1(L'SSIBJBID),SSIBJBID·JOBNUMBER·TEXT.....11/02·Z12·28130000
3627 ..... #TEST·SIZE=(L'MDVARS,GE,L'SSIBJBID+1)·FIT·CHECK.....11/02·Z12·28140000
3628 LASDSSIZ·DS·0H.....11/02·Z12·28150000
+ 3629 ..... LLH...R1,LASWASID.....get ASID (or 0).....PEM-2601A hevowfny
+ 3630 ..... LTR...R1,R1.....is it 0?.....PEM-2601A l5recn2x
+ 3631 ..... JNP...LASDUSSZ.....yes, say not USS a/s.....PEM-2601A lrtyp6m1
+ 3632 ..... BAS...R14,USSAS.....is it a USS a/s?.....PEM-2601A juy7w8vs
+ 3633 ..... J...LASDUSSZ.....+00 - no.....PEM-2601A eflh8oxo
+ 3634 ..... MVI...MDFLAGS1,X'80'.....+04 - yes.....PEM-2601A etuwo755
+ 3635 LASDUSSZ·DS·0H........PEM-2601A k2t6xo5f

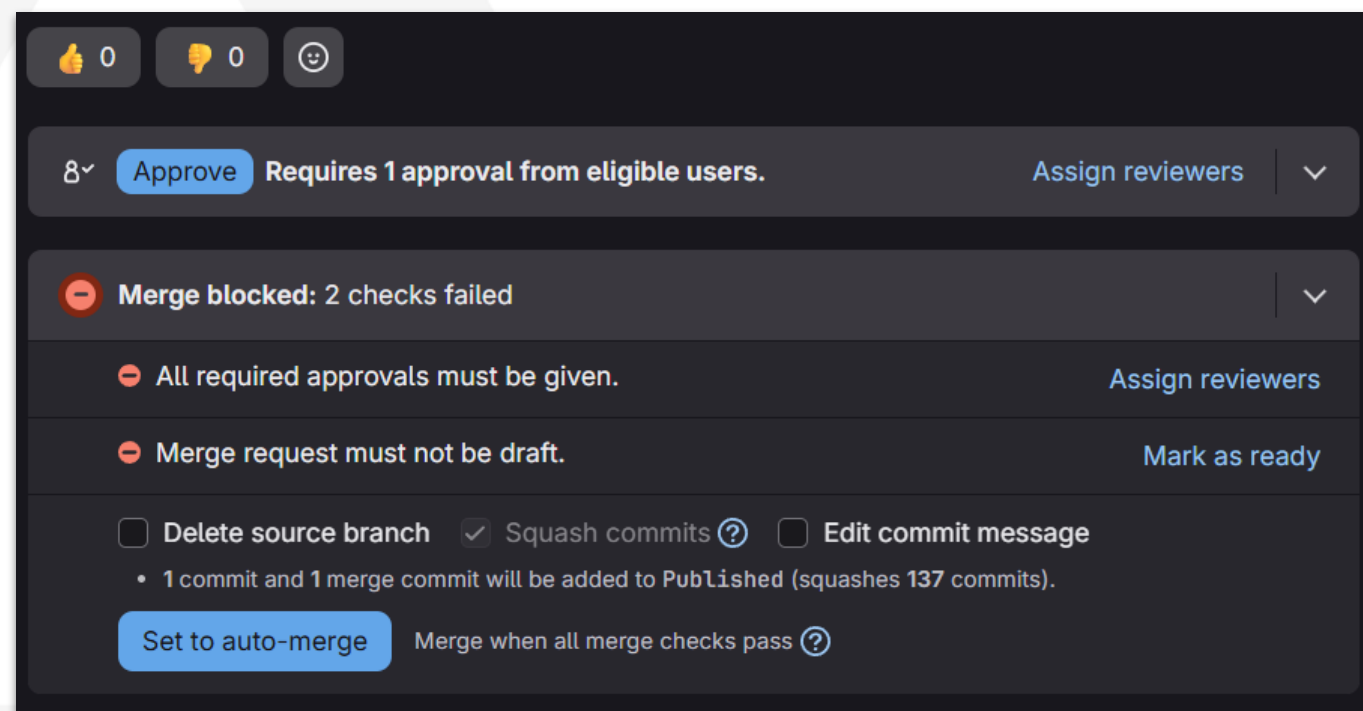
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PARIS IN THE THE SPRING

Mental Fatigue and Familiarity

- **Don't review your code after a long day.** Take a break or get a colleague to take a look.
- **You miss details in familiar code.** Get some distance and be sure you're not taking anything for granted.



Practical Techniques to Break Free

- **Counter your biases.** Take breaks before reviewing your code.
- **Try a different approach.** Change your environment or format when you review.
- **Talk to the duck.** Read your code out loud to someone (even a rubber duck!)
- **Use the tools available.** Automated tools and debuggers don't get tired or make assumptions.





LET'S DEBUG!

THE LARGER LESSON

- Your brain has blind spots...and the creativity to design around them.
- The ways your mind will betray you are predictable. Anticipate and use the tools that overcome your limitations!



Questions/Comments/Rants

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