Background Information

Please enter your email address

How do you test your own code? (Check ALL that apply)

If you test differently depending on the language or programming environment, explain.

- [ ] Print statements
- [ ] Unit tests
- [ ] Testing tools
- [ ] Other:

Do you have experience with creating/editing/maintaining unit tests?

- ○ Yes
- ○ No

Unit Testing

Please rank the following motivations for writing unit tests based on your experience (Drag up or down to reorder).

- To ensure that a unit functions as expected
- To accept a unit from other sources
- To specify a unit (test first)
- To improve the program quality in general
- To meet program requirements
- Other:

How do you spend your program development time (in percentage)?

Writing new code	0
Writing new tests	0
Debugging and fixing	0
Refactoring	0
Other:	0

Total	0

How important are the following aspects for you when you write new unit tests?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
Code coverage	○	○	○	○	○
Execution speed	○	○	○	○	○
Robustness against code changes	○	○	○	○	○
How realistic the test scenario is	○	○	○	○	○
How easily faults can be localised/debugged if the test fails	○	○	○	○	○
How easily the test can be updated when the underlying code changes	○	○	○	○	○
Sensitivity against code changes	○	○	○	○	○

Please select which techniques you apply when writing new tests (Check ALL that apply)

- ☐ Automated test generation
- ☐ Code coverage analysis

- [ ] Mutation analysis
- [ ] Test-driven development
- [ ] Systematic testing approaches
- [ ] Mocking/stubbing
- [ ] Other:
- [ ] Never

What do you use automated unit test generation for? (Check ALL that apply)

- [ ] Exercising specifications
- [ ] Exercising assertions in the code
- [ ] Exercising parameterised unit tests
- [ ] Finding crashes and undeclared exceptions
- [ ] Regression testing
- [ ] To complement manually written tests
- [ ] Other:

Please rank the following aspects of writing a new unit test according to their difficulty (Drag up or down to reorder)

Determining what to check

Finding and creating relevant input values

Identifying which code/scenarios to test

Finding a sequence of calls to bring the unit under test into the target state

Isolating the unit under test

What makes it difficult to fix a failing test? Please rank by importance (Drag up or down to reorder)

The test reflects outdated behavior

The test is difficult to understand

The code under test is difficult to understand

The test reflects unrealistic behavior

The test is flaky (it fails non-deterministically)

Please indicate your level of agreement with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Writing unit tests is difficult	○	○	○	○	○	○	○
I enjoy writing unit tests	○	○	○	○	○	○	○
I would like to have more tool support when writing unit tests	○	○	○	○	○	○	○
I would like to have more unit tests	○	○	○	○	○	○	○
Maintaining unit tests is difficult	○	○	○	○	○	○	○
I usually have sufficiently many unit tests	○	○	○	○	○	○	○