How Do Your Software Developers Measure Up?

Why is assessing software competency important?

Every year $billions of programmable processors are used in electrical equipment and devices.

As the devices get smarter, so too must the embedded software design and development that powers them.

Poor quality software can lead to bugs, product failures and product recalls – all of which can be time consuming to correct and damaging to the brand.

Greater competency in software development leads to better quality code and typically reduces product development times and costs for debugging.

To ensure quality, many industries also require the embedded software and systems in their products meet certain quality guidelines or regulations such as DO-178C, ISO 26262, IEC 62304 and EN 50128.

How do we assess someone's competence?

The majority of assessment models use a very simplistic model that employs simple, single-answer, multiple-choice type questions. They also don't necessarily take into account a person's current and expected competence levels.

Feabhas is different. We have developed a three-step model for assessment, which gives as accurate a picture as possible of the student's knowledge – before and after training. Our results show impressive improvements!

1. We use a range of question types.

Our assessments minimize the ability to correct guess at answers by using different question types:

- Multi-response
- Numeric
- Fill-in-the-blank (pattern matching)
- Hotspots (the user clicks on the correct area within the image)
- Drag and drop questions (users drag and drop items in one column to match items in another / or arrange them in sequence)

2. We weight the responses.

Each answer is weighted based on three different types of question: core, intermediate and advanced.

As the emphasis of the training is to ensure developers have a strong grounding in core, foundation knowledge, the core answers have the highest weighting, followed by intermediate and then advanced.

"Many people find that after attending one of our courses, both their competency and their confidence in software development has increased by much more than they had expected. "
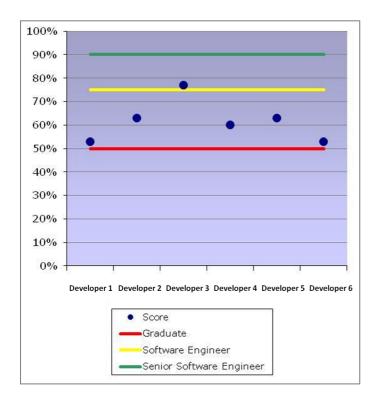
3. We benchmark the results.

To help determine individual levels of competency, we score each candidate against a set of benchmark results for a graduate, software engineer and senior software engineer. We do this for every module within the programme (such as C and C++ programming, software engineering and software quality).

The benchmark score is determined using an expected percentage of correct answers for each question type (basic, intermediate and advanced level). For example, a graduate should be able to get the majority of basic questions correct and some intermediate questions; but it would not be reasonable to expect them to be able to answer advanced questions correctly.

Conversely, a senior software engineer should be reasonably expected to answer almost all the basic questions correctly, the majority of the intermediate questions and a high proportion of the advanced questions.

Sample Pre-Course Assessment Scores for 'Software Engineering Competency'

We are with you all the way

We carry out individual assessments to measure quality performance.

We will assess each developer's abilities and measure them against our pre-determined basic, intermediate and advanced levels for the following competencies:

- Software engineering
- C programming
- C ++ programming
- Platform
- Design
- Software quality

So you can measure the ROI.

The reports we provide include the scores in each of the competency areas above. If the scores highlight any development areas, we have a range of options for consultancy, mentoring and training courses that can support your needs.

"Our assessment results show that after attending one of our courses, attendees regularly improve their competency by more than 40%."

Try an assessment for free!

To find out more about our assessments or to take a trial test, please contact us today.

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FEABHAS
EMBEDDING SOFTWARE COMPETENCE