

# Quality Software Development

## Maintainability

### Qualification

## What is it?

A brand new qualification from PEOPLECERT, developed in collaboration with the Software Improvement Group (SIG) to certify programmers who have the necessary skillset to produce high quality code.

## Why was it developed?



### The problem:

Bad code is bad for business.

High quality code is cheaper to maintain than low quality code. On the contrary, an average size system implemented with low quality code system can cost to an organization \$1M during the system's lifetime!\*

\* Deloitte University Press, Tech Trends 2014 – Inspiring Disruption

**\$500 Billion**

{ global IT debt  
with a potential to double  
within the next couple  
of years

Source:  
Andy Kyte, "Measure and manage your IT  
debt," Gartner, Inc.,  
August 9, 2010 (last reviewed June 19, 2013)



### The solution:

Quality Software Development Qualification.

By training developers to write high quality code, an organization can avoid a build-up of technical debt in its systems and thus can serve its needs better (e.g. faster time to market, faster bug-fixing and so on).

Organizations can achieve this with qualified developers who know how to write high quality code.

**52%**

{ of debugging effort  
is spent on complex defects  
which account for only  
8% of all defects.

Source:  
Deloitte University Press, Tech Trends 2014 –  
Inspiring Disruption)

**66%**

{ of debugging time  
can be saved with  
software of high quality

Source:  
Dennis Bijlsma, Miguel Alexandre Ferreira,  
Bart Luijten, Joost Visser:  
Faster issue resolution with higher  
technical quality of software.  
Software Quality Journal, 2012

## How

- **Set metrics-based standards:** Ten guidelines that are clear, easy-to-follow, meaningful, and have high-impact on code quality
- **Train developers** to use these standards effectively: Through explanation, examples and exercises that are immediately applicable in the daily programming practice
- **Train teams** to organize their development process and quality control around these standards: Tools, techniques, practices to be applied by development teams to consistently produce high quality code.

## Who is it for?

- Software developers with experience in Object Oriented technologies (e.g. Java, C#), wishing to learn how to create good quality code
- Software development teams who want to learn best practices to ensure they produce maintainable software

## What are the certification levels?

### Foundation

For all software  
developers

### Advanced

Coming  
soon

For leaders  
of software  
development  
teams

### Target audience Job Titles

- Senior Decision Makers in Software Development
- Senior HR/L&D Roles: Director/Head of Recruitment, Head of Training, Head of Talent
- Programmers with experience in Object Oriented technologies

### Exam details

- Exam currently available for Java and C#
  - 75 questions, 2h duration
  - Closed book
- Expected background: 2 years of working experience in object-oriented programming language, or BSc in computer science or software engineering

## Benefits

### For Organizations

- High quality code is cheaper to maintain. Initial development benefits from high maintainability from day 1
- Sustainable business needs maintainable software: Time-to-market is lower with higher maintainability
- Software quality is not left to chance: Agreement on code level specifics to achieve high quality, maintainable software

### For Individuals

- Software developers learn how to create high quality code
- Software developer teams can adopt best practices to produce maintainable software
- Software developers deliver demonstrably more value