IT Software Developer L4 Apprenticeship

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www.sgscol.ac.uk/study/computing/it-software-developer-l4-apprenticeship

Summary

The primary role of a software developer is to build and test simple, high-quality code across front end, logic and database layers. A developer will typically be working as part of a larger team, in which they will have responsibility for some of the straightforward elements of the overall project. The developer will need to be able to interpret design documentation and specifications. The customer requirements will typically be defined and agreed by more experienced or specialist members of the team, such as a business analyst or technical architect.

Typical Job Roles
Web Developer, Application Developer, Mobile App Developer, Games Developer, Software Developer.

Duration
24 months

Programme Delivery
Apprentices must achieve one internationally recognised vendor or professional qualification and also a knowledge module. SGS has elected to deliver the on-programme learning using the combination listed below.   These must both be passed before the end point assessment can take place.

Apprentices will have their Knowledge and Technical Understanding formally assessed at relevant times during their apprenticeship. Evidence will be collated within a portfolio of evidence.
Those completing the apprenticeship are eligible to apply for registration onto the register of IT technicians confirming SFIA level 3 professional competence.

Resources

Apply online

Resources will be available through Smart Assessor, the e-portfolio platform used by the college for apprentices.

Assessment Overview

On Programme Assessment
The apprentice will carry out work as defined by their employer, select evidence from their portfolio and pass the tests for underpinning knowledge and understanding.
The employer creates opportunities for the apprentice to carry out work and produce outcomes and then confirms that apprentice is ready for end point assessment.

End Point Assessment
The end point assessment includes an assessment of all the requirements of the standard, including, competencies, skills, knowledge and behaviours. It takes place in the final few months of the apprenticeship, using four assessment methods:

- Portfolio
- Project
- Employer reference
- Interview

Portfolio
This is produced towards the end of the apprenticeship, containing evidence from real work projects which have been completed during the apprenticeship, usually towards the end, and which, taken together, cover the totality of the standard, and which is assessed as part of the end point assessment.

Project
This giving the apprentice the opportunity to undertake a business-related project over a one-week period away from the day to day workplace.

Employer Reference
Provides the employer's perspective on how the apprentice has performed in the workplace and how they have applied their knowledge, competencies and behaviours in work projects.

Structured Interview with an assessor - exploring what has been produced in the portfolio and the project as well as looking at how it has been produced

An independent assessor will assess each element of the end point assessment and will then decide whether to award successful apprentices with a pass, a merit or a distinction.

Our recommended End Point Assessment Organisation (EPAO) is BCS

Skills, Knowledge and Behaviors for the Software Developer Apprenticeship

A Standard contains a list of the competencies, skills, knowledge and behaviours an apprentice will need to have learned by the end of their apprenticeship.

Technical Competencies

- Logic: writes good quality code (logic) with sound syntax in at least one language
- User interface: can develop effective user interfaces for at least one channel
- Data: can effectively link code to the database/data sets
- Test: can test code and analyse results to correct errors found using either V-model manual testing and/or using unit testing
- Problem solving: can apply structured techniques to problem solving, can debug code and

can understand the structure of programmes in order to identify and resolve issues
- Design: can create simple data models and software designs to effectively communicate understanding of the program, following best practices and standards
- Analysis: can understand and create basic analysis artefacts, such as user cases and/or user stories
- Deployment : can understand and utilise skills to build, manage and deploy code into enterprise environments
- Development lifecycle: can operate at all stages of the software development lifecycle, with increasing breadth and depth over time with initial focus on build and test.
- Can apply good practice approaches according to the relevant paradigm (for example object oriented, event driven or procedural)
- Can interpret and follow:
- software designs and functional/technical specifications
- company defined 'coding standards' or industry good practice for coding
- testing frameworks and methodologies
- company, team or client approaches to continuous integration, version and source control
- Can respond to the business environment and business issues related to software development
- Can operate effectively in their own business's, their customers' and the industry's environments
- Can apply the maths required to be a software developer
Technical Knowledge and Understanding
- Understands and operates at all stages of the software development lifecycle
- Understands the similarities and differences between agile and waterfall software development methodologies
- Understands how teams work effectively to produce software and contributes appropriately
- Understands and applies software design approaches and patterns and can interpret and implement a given design, compliant with security and maintainability requirements
- Understands and responds to the business environment and business issues related to software development
- Understands and applies the maths required to be a software developer

Underpinning Skills, Attitudes and Behaviours

- Logical and creative thinking skills
- Analytical and problem solving skills
- Ability to work independently and to take responsibility
- Can use own initiative
- A thorough and organised approach
- Ability to work with a range of internal and external people
- Ability to communicate effectively in a variety of situations
- Maintain productive, professional and secure working environment

20% Off-The-Job Training
"Off-the-job training is a statutory requirement for an apprenticeship. It is training which is received bythe apprentice, during the apprentice's normal working hours, for the purpose of achieving the knowledge, skills and behaviours of the apprenticeship.

In addition, there will be relevant activities in the workplace which will be discussed and planned with the assessor which will count towards the total hours required.

- Working to deadlines
- Creating project plans
- Using appropriate software tools

- Supporting development teams
- Proposing software solutions

Maths & English

Level 2 English and maths will need tLevel 2 English and maths will need to be achieved, if not already, prior to taking the end point assessment.o be achieved, if not already, prior to taking the end point assessment.

South Gloucestershire and Stroud College