

THE APPRENTICE and TRAINING PARTNERSHIP

LEVEL 3 SOFTWARE DEVELOPMENT TECHNICIAN

Role Profile:

A Software Development Technician typically works as part of a software development team, to build simple software components (whether web, mobile or desktop applications) to be used by other members of the team as part of larger software development projects. They will interpret simple design requirements for discrete components of the project under supervision. The approach will typically include implementing code, which other team members have developed, to produce the required component.

The Software Development Technician will also be engaged in testing and ensuring that the specific component meets its intended functionality.

Entry Requirements:

Individual employers will set the selection criteria, but this is likely to include 5 GCSEs (especially English, mathematics and a science or technology subject); other relevant qualifications and experience; or an aptitude test with a focus on IT skills.

Typical Job Roles

- Software Development Technician
- Junior Developer
- Junior Web Developer
- Junior Application Developer
- Junior Mobile App Developer
- Junior Games Developer
- Junior Software Developer
- Junior Application Support Analyst
- Junior Programmer
- Assistant Programmer
- Automated Test Developer

Initial Assessments:

Initial assessments for Maths and English will be carried out for all apprentices using an approved diagnostic tool. This will include a full diagnostic of knowledge in Maths and English to gauge the level at which the apprentice is working. This will enable us to support the apprentice and structure training provision. Learners' suitability for the chosen apprenticeship programme is also initially assessed to ensure each learner is on the most appropriate programme for their chosen career path.

Delivery Model:

A minimum of 20% of the apprenticeship training takes place off-the-job and is flexibly delivered to suit your business. Training can be a combination of classroom and workplace workshops, block-training or day-release at our centre; with the remaining time being spent in the workplace.

A full timetable for training, ongoing assessment and End-Point Assessment will be issued to both you as the employer; and the apprentice, once the delivery model and training elements have been agreed.

On programme assessment will take the form of progress reviews with the trainer, employer and apprentice at least every 12 weeks. Feedback with ongoing development will include additional learning materials, resources and training delivered through the apprentice's e-portfolio OneFile; to which employers have access to view the progress and the development of each apprentice.

Programme Duration:

The duration of this apprenticeship is typically 18 months.

Programme Structure:

Technical Competencies

- **Logic:** Write simple code for discrete software components following an appropriate logical approach to agreed standards (whether for web, mobile or desktop applications).
- **Security:** Apply appropriate secure development principles to specific software components at all stages of development.
- **Development Support:** Apply industry standard approaches for configuration management and version control to manage code during build and release.
- **Data:** Make simple connections between code and defined data sources as specified.
- **Test:** Functionally test that the deliverables for that component have been met or not.
- **Analysis:** Follow basic analysis models such as use cases and process maps.
- **Development Lifecycle:** Support the Software Developers at the build and test stages of the software development lifecycle.
- **Quality:** Follow organisational and industry good coding practices (including those for naming, commenting etc.).
- **Problem solving:** Solve logical problems, seeking assistance when required (including appropriate mathematical application), respond to the business environment and business issues related to software development.
- **Communication:** Clearly articulate the role and function of software components to a variety of stakeholders (including end users, supervisors etc.), operate appropriately in their own business's, their customers' and the industry's environments.
- **User Interface:** Develop user interfaces as appropriate to the organisations development standards and the type of component being developed.

Technical Knowledge and Understanding

- Understand the business context and market environment for software development
- Understand the structure of software applications
- Understand all stages of the software development lifecycle
- Understand the role of configuration management and version control systems and how to apply them
- Understand how to test code (e.g. unit testing)
- Recognise that there are different methodologies that can be used for software development
- Understand the particular context for the development platform (whether web, mobile, or desktop applications)
- Understand the roles within a software development team
- Understand how to implement code following a logical approach
- Understand how code integrates into the wider project

- Understand how to follow a set of functional and non-functional requirements
- Understand the end user context for the software development activity
- Understand how to connect code to specified data sources
- Understand database normalisation
- Understand why there is a need to follow good coding practices
- Understand the principles of good interface design
- Understand the importance of building in security to software at the development stage

Underpinning Skills, Attitudes and Behaviours

- Logical and creative thinking skills
- Problem solving skills
- Ability to work independently and to take responsibility
- 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 a productive, professional and secure working environment

Qualifications:

Apprentices must achieve each of the Ofqual-regulated knowledge modules, as summarised below.

Section 1 ► Knowledge Module 1:

Software Development Context and Methodologies (for level 3 Software Development Technician)

Section 2 ► Knowledge Module 2:

Programming (for level 3 Software Development Technician)

Progression:

This apprenticeship is recognised for entry onto the Register of IT Technicians upon confirming an appropriate SFIA level 3 professional competence. Those completing the apprenticeship would then be eligible to apply for registration.