

# Software Developer - Level 4

## Apprenticeship

We are leading a Tech Education revolution spotting untapped talent and welcoming everyone regardless of age, background, culture, or education. We test individuals for aptitude and ability in a way that removes all other barriers. In our first two years, 450 individuals have experienced our 3-week intensive sprints and 200 have joined a full-time programme. Our students are pioneers, using a peer-to-peer pedagogy to learn how to learn and problem-solve across a range of coding languages. This is essential in an ever-changing tech industry. Our apprentices are also unique! They have spent at least 900 hours with O1F, learning key skills and coding languages before they start their apprenticeships with you and are ready for the challenge.

### Occupation summary

This occupation is found across every sector for example, Financial Services, Computer Gaming, Retail, Transport, Security and Defence in organisations ranging from large multi-nationals, public sector bodies and government projects developing multi-billion-pound software solutions to support key projects to small consultancy firms designing bespoke software solutions for clients.

The broad purpose of the occupation is to understand a client's requirements as provided in design specifications and then build and test high-quality code solutions to deliver the best outcome.

Software developers are the creative minds behind computer programs. Some develop applications that allow people to do specific tasks on a computer or another device. Others develop the underlying systems that run the devices or that control networks.

For example, a software developer may work on Transport ticketing systems, traffic light control systems, customer-facing websites for journey planning and account management, and internal websites for monitoring the status of train and road networks. Bespoke asset management systems.

In a computer gaming context, a software developer may work with a creative digital design team to give life to the teams' ideas through the delivery of effective code to provide an attractive gaming experience that can give the

**Duration:** 1 Year

**Location:** Workplace/College

**Sector:** Digital

product a commercial advantage.

In a retail context, a software developer may work on delivering coding solutions to deliver online retail opportunities for businesses that provide a responsive and secure trading environment for customers to purchase goods and interact with the retailer.

Organisations use software to ensure that their operations become ever more effective and robustly reduce the incidence of downtime by building quality-tested software solutions to give a better service. For example, in commercial organisations, this can give them a competitive advantage by being able to analyse significant amounts of data quickly and efficiently to provide the business with information and management systems. This can save time and help the business spot profit-making opportunities. For public sector bodies, the right software solution can drive up performance and help target scarce resources more effectively and ensure that customer expectations are more likely to be met.

A software developer in a medium to large organisation 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. In a smaller enterprise, a software developer may be working as the only developer on a project but under direct supervision. A software developer will interpret design documentation and specifications provided by more experienced or specialist members of the team, such as a business analyst or technical architect.

In their daily work, Software Developers interact with internal and external parties including users/customers (to understand their needs and test the software developed through user testing) and team members from a range of specialist fields including designers, developers, engineers, analysts and project/delivery managers (to ensure the effective implementation of software solutions). 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.

A Software Developer is typically office-based however field-based research and testing may require periods of time working in the environments of the clients whose needs they are seeking to meet.

An employee in this occupation will be responsible for developing software solutions across the full software development life cycle from research and development, through continuous improvement, to product/service retirement. They may work both autonomously and as part of wider teams, typically reporting to a more senior member of their team.

## ENTRY CRITERIA

Knowledge of Golang, Javascript, Rust, Html, SQL, GraphQL, Docker, Css, Python, Unix, C, Shell, PHP, Ruby, Java, React, Node.JS.

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