









Software Development Technician Apprenticeship Standard Level 3

**June 2018** 

#### **About NowSkills**



There are 2 things that differentiate NowSkills from regular apprenticeship providers: We specialise in IT Apprenticeships and we are only based in the Northwest of England. So if you're looking for a provider who knows their CSS from their CPU and their BYOD from their BSoD and also delivers engaging learning with excellent customer service, then we could be the answer.

As we're only based in the Northwest of England, you'll be working with our "A" team, not a regional office. Our learners apply to us direct because we're known for delivering real IT roles and for working with some of the region's leading employers. We deliver our own style of added-value IT Apprenticeships, in our own city-centre training venues (Liverpool & Manchester) using our own fulltime employed teams.

## We don't resell anyone else's Apprenticeships

At NowSkills IT Apprenticeships we have developed a bespoke apprenticeship program for the Software Development Technician Standard. Our bespoke program includes classroom training, online learning, 1-2-1 training and mentoring as part of a real paid job with a local employer.

The course will equip apprentices with the knowledge and understanding required for the role of Software Development Technician. It will also facilitate the apprentice in developing and enhancing their existing IT skills, Personal Learning and Thinking Skills (PLTS) and support from your company through its continual development and prosperity.

This is an official Apprenticeship Standard qualification, not an Apprenticeship Framework. When you compare Apprenticeships, ensure you're enrolling onto the latest Apprenticeships Standards. From 2018 all new NowSkills apprenticeship enrolments will be on Standards.



## Levels of Qualifications 94.6% **Apprentices** Level 1 complete programme' Aug 17 - June 97% customers Level 2 (Intermediate commend ou service\* **Apprenticeships**) Jan - June 18 Level 3 (Advanced **Apprenticeships**) Level 4 (Higher **Apprenticeships**) Level 5 (Higher **Apprenticeships**) Level 6 (Higher

First certificate

GCSE - grades 3, 2, 1 or

grades D, E, F, G

Level 1 certificate

Level 1 award

Level 1 diploma

- Level 1 ESOL Level 1 essential skills
- Level 1 functional skills
- Level 1 national vocational qualification (NVQ)
- music grades 1, 2 and 3
- GCSEs grades A\*-C
- BTEC First Diplomas and Certificates
- **OCR Nationals**
- Key Skills Level 2
- NVQs at Level 2
- A Levels
  - Advanced Extension Awards
  - GCE in applied subjects
  - International Baccalaureate
  - Key Skills Level 3
- NVQs at Level 3
- **BTEC Diplomas**
- **BTEC Nationals**
- OCR Nationals

- NVQs at Level 4
- BTEC Professional Diplomas, Certificates and Awards
- Foundation degrees
- Honours Degrees and more
- Diploma of higher education (DipHE)
- Foundation degree
- Higher national diploma (HND)
- Level 5 award
- Level 5 certificate Level 5 dioloma
- Level 5 NVQ
- Degree apprenticeship
- Degree with honours for example bachelor of the arts (BA) hons, bachelor of science (BSc) hons
- Graduate certificate
- Graduate diploma
- Level 6 award
  - Level 6 diploma
  - Level 6 NVQ
  - Ordinary degree without honours

Level 6 certificate

## Level 7 (Higher **Apprenticeships**)

Level 8 (Higher

**Apprenticeships**)

**Apprenticeships**)

- Integrated master's degree, for example Master of engineering (MEng)
- Level 7 award
- Level 7 certificate
- Level 7 diploma
- Level 7 NVQ Master's degree
- Postgraduate certificate
- Postgraduate diploma

- Doctorate, for example doctor of philosophy (PhD or DPhil)
  - Level 8 award
  - Level 8 certificate
  - Level 8 diploma

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## Job Role: Software Development Technician

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 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. **Apprenticeship:** Software Development Technician Level 3

**Duration:** 15-18 months

Levy Funding Band: £14,950\*
\*non-Levy 100% Government Funded,
Co-Investment or Levy Funded options
available

Funding

Available

Updated: June 2018

If you are unsure about your organisation's funding eligibility please contact us for details or request a copy of our Apprenticeship Funding, Rules, Prices, Grants and Apprenticeship Levy Information For Employers Guide



## Who is this Apprenticeship suitable for?

The Software Development Technician apprenticeship is suitable for any apprentice leaving secondary or tertiary education who has a keen interest in one or more of the various branches of software development, including building and testing simple software components (whether web, mobile or desktop applications) as part of larger projects.

Software Development Technician apprentices will have 20% off the job training that will take place in the form of online learning via a Learning Management System platform, classroom-based learning, webinars and video tutorials.

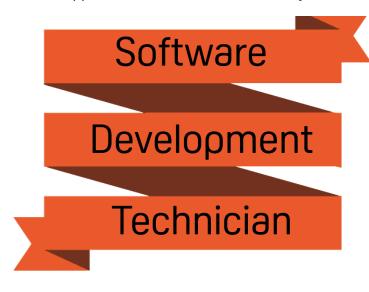
#### Other Level 3 Apprenticeship Standards from NowSkills



#### At the end of this Apprenticeship, Apprentices will be able to...

Each Software Development Technician apprentice will not only work toward achieving professional qualifications they will also learn how to use different software applications relevant to the industry.

- how to apply their software development knowledge, skills and understanding within a business context and market environment
- how to understand the structure of software applications
- about all stages of the software development lifecycle
- the role of configuration management and version control systems and how to apply them
- how to test their code
- recognise the different methodologies used within software development



- understand context for the development platform (web, mobile or desktop applications)
- what their role is within their software team
- how to implement code following a logical approach
- interpret design requirements for discrete component software solutions under general supervision
- implement code to produce components required in application development
- engage in testing that the software component meets its intended functionality

# Technical Knowledge and Understanding of a Software Development Technician Apprentice

- Understands the business context and market environment for software development
- Understands the structure of software applications
- Understands all stages of the software development lifecycle
- Understands the role of configuration management and version control systems and how to apply them
- Understands how to test their code (e.g. unit testing)
- Recognises that there are different methodologies that can be used for software development
- Understands the particular context for the development platform (whether web, mobile, or desktop applications)
- Understands their role within their software development team
- Understands how to implement code following a logical approach
- Understands how their code integrates into the wider project
- Understands how to follow a set of functional and non-functional requirements
- Understands the end user context for the software development activity
- Understands how to connect their code to specified data sources
- Understands database normalisation
- Understands why there is a need to follow good coding practices
- Understands the principles of good interface design
- Understands the importance of building in security to software at the development stage





#### ►Technical Competencies of a Software Development Technician Apprentice

- Security: applies appropriate secure development principles to specific software components all stages of development
- Development support: applies industry standard approaches for configuration management and version control to manage code during build and release
- Data: makes simple connections between code and defined data sources as specified Test: functionally tests that the deliverables for that component have been met or not
- Problem solving:
- o Solves logical problems, seeking assistance when required (including appropriate mathematical application)

  o Responds to the business environment and business issues
- o Responds to the business environment and business issues related to software development
- Communication: clearly articulates the role and function of software components to a variety of stakeholders (including end users, supervisors etc.)
- User Interface: develops user interfaces as appropriate to the organisations development standards and the type of component being developed
- Operates appropriately in their own business's, their customers' and the industry's environments

It takes on average 17 days for NowSkills to place an Apprentice and fill an IT vacancy\*



- Analysis: follows basic analysis models such as use cases and process maps
- Development lifecycle: supports the Software Developers at the build and test stages of the software development lifecycle
- Quality: follows organisational and industry good coding practices (including those for naming, commenting etc.)

# Underpinning Skills, Attitudes and Behaviours of a Software Development Technician Apprentice

- Logical and creative thinking skills
- 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
- Maintains productive, professional and secure working environment



#### Classroom Training Included

NowSkills includes 6 weeks of instructor led classroom training courses at as part of the Software Development Technician Standard. The courses are designed to meet the technical objectives of the Apprenticeship. NowSkills delivers its own tailored courses in its own classrooms using its own employed trainers.



All of these classroom courses will lead to Apprentices' achieving their vendor qualifications









#### Learning Support For Apprentices Included

At the start of an Apprenticeship, Apprentices are assigned a tutor who will be their main NowSkills contact point. The assessor will keep in regular contact with an Apprentice: for example, making workplace visits and acting as an intermediary with the employer. The assessor will also act as the first point of contact for any issues an Apprentice may have.

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#### Online Training Included

Each learner enrolled on NowSkills' Software Development Technician Apprenticeship have access to a range of online courses on our elearning platform. Learners are given their own login and workspace and will be assigned a series of elearning courses to supplement their learning. We have over 2,000 different courses to choose from and these can be chosen to match the specific role and learning gaps of the learner.



#### LinkedIn Training Included

NowSkills offer exclusive access to the LinkedIn Online Learning platform for every Apprentice. There's a variety of courses available and learners can choose what they are interested in learning.

Learners can choose different subjects to learn in the following areas; Business, Creative and Technology.

Once a learner completes a course, they will receive a badge of completion on their LinkedIn profile as well as a downloadable certificate.

#### 2017/18 Content Coverage

## **Business Topics**

#### **BUSINESS SOFTWARE** AND TOOLS

Business Intelligence Cloud Storage CRM Software Desktop Databases Diagramming Document Managemen Fmail

Messaging Note Taking Desktop Operating Systems PDF Management Personal Productivity Presentations Project Management Software

#### CAREER DEVELOPMENT

#### AND MANAGEMENT

Coaching and Mento Decision-Making\* Leadership Skills Meeting Skills\* Nonprofit Managemen Organizational Leadershi alent Management Teams and Collaboration Time Management

Advertising and Promotion B2B Marketing B2C Marketin Brand Managemer ontent Marketing Digital Marketing Enterprise Marketing Mobile Marketing ay-Per-Click Marketin Personal Branding\* earch Engine Optimization

Small Business Marketing

Social Media Marketing

Web Marketing Analytics

Business Law Business Strategy Communication Decision-Making Event Planning Meeting Skills\* Onerations Manag Product Managemen Public Speaking Teams and Collab

MARKETING

Search Engine Marketing (SEM)

#### PROFESSIONAL DEVELOPMENT

Personal Effectivenes

Digital Painting Illustration Painting VIDEO

#### Audio for Video

Concept Art\*

Game Developmen

Real-Time Rendering

ILLUSTRATION

Art Composition

Comic Books

Game Art

Rigging

Keying\* Shooting Video Sound Design Video Color Grading Video Editing Video Post-Productio Video Pre-Production Video Production Video Script Writing

#### Creative Topics ANIMATION

Brand Design 2D Animation 3D Animation 3D Lighting Design Thinking\* Digital Publishing 3D Modeling BD Particles 3D Printing\* Layout and Compos 3D Texture Character Animation Typography\*

2D Tracking 3D Tracking Animation\* Keying\* Motion Typography Rendering Storyboarding

WEB DESIGN Interactive Web Conten Mobile Web Design Web Design Business

Visual Effects

## GRAPHIC DESIGN

#### MOTION GRAPHICS

Web Standards

#### **PHOTOGRAPHY**

Architectural Photography Black and White Photography Color Correction Image Editing Macro Photography

Night Photography Photo Business\* Photo Compositing

Photo Management Photo Restoration Photo Sharing Photography Lightin Photography Printing

Portrait Photograph Product Photograph Raw Processing Street Photography Time-Lapse Photograp Travel Photography

#### **USER EXPERIENCE**

Design Thinking Interaction Design Multidevice Design User Research

Wedding Photography

## Technology Topics

#### **CLOUD COMPUTING**

Cloud Platforms Cloud Security

#### DATABASE MANAGEMENT

Database Administration Database Development

#### Artificial Intelligence

Big Data **Business Analytics** Data Analysis\* Data Governance Data Modeling Data Science Careers

#### Machine Learning Statistics

Enterprise Database Microsoft Developmen

#### IT HELP DESK

Help Desk Skills Operating System Distrib Upgrade and Maintenance

#### MOBILE DEVELOPMENT

Cross-Platform Deve iOS Development

# **NETWORK AND**

CRM Administration

oT Infrastructure

IT Automation

Enterprise Content Managemen

Mobile Device Managemer

Server Operating Systems

Software Deployment

SOFTWARE

DEVELOPMENT

Database Developr

Game Development\*

SECURITY

Access Control

SOFTWARE

Design Patterns

Backup and Recovery

Software Development Security

hreats and Vulnerabilities

**METHODOLOGIES** 

Software Development Tools

Object-Oriented Programmi

Programming Foundation:

Cloud Foundations

#### Cloud Storage

#### DATA SCIENCE

## IoT Analytics

ENTERPRISE CRM and ERP Developmen

Software Design Software Project Management Software Quality Assurance Software Testing

#### WEB DEVELOPMENT

ontent Management Systems Front-End Web Developmen Frameworks and Libraries

#### End Point Assessment and your Apprenticeship Grade Included

Apprenticeship Standards differ from Frameworks in that they include an End Point Assessment. The End Point Assessment takes place toward the end of the apprenticeship, usually in the last 2-3. End-point assessmentsz can only take place when any mandated on-programme classroom, online and vendor qualification learning has been passed.

> STFP Summative **Portfolio**

Provides evidence against the totality of the standard, based on the application of knowledge, competence and behaviours to real work projects in the work environment. This is key to ensure the validity of the final assessment decision.

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.

STEP 2 **Employer** Reference

STEP 3 **Synoptic Portfolio** 

Provides evidence against a selected set of knowledge, competencies and behaviours against a pre-defined project undertaken in a controlled environment. This is key to ensure consistency and comparability, increasing the accuracy of the assessment decision.

Provides an opportunity for further evidence to be gathered and/or evidence to be explored in more detail against any of the knowledge, competence or behaviours. This also increases accuracy and validity.

STEP 4 Interview

#### Apprenticeship End Point Assessment and grading: who does it?

Any organisation on the ESFA's Register of Apprentice Assessment Organisations (RoAAO) can undertake Apprenticeship EPA against the standard, for which they're registered. Also, these organisations are responsible for delivering Apprenticeship End Point Assessments based on the specifications produced by the employers.

NowSkills would normally arrange a learner's Apprenticeship End Point Assessment. If employers would like to make their own arrangements, please inform us during the first 6 months of the apprenticeship. Additional charges may apply.

#### What Vendor Qualifications will Apprentices earn on this Apprenticeship?

NowSkills' Software Development Technician apprentices, as part of achieving their Apprenticeship, will also work toward achieving the following vendor qualifications. They will also take exams in:

- Microsoft Technology Associate Introduction to Programming Using HTML and CSS
- CIW Internet Business Associate
- BCS Level 3 Certificate in Software Development Context & Methodologies
- BCS Level 3 Certificate in Programming
- Functional Skills English and/or Mathematics (where required)









## Microsoft Technology Associate Introduction to Programming Using HTML and CSS



#### Understand HTML Fundamentals (10-15%)

- Construct markup that uses metadata elements
- Script; noscript; style; link; meta tags, including encoding, keywords, viewport, and translate
- Construct well-formed markup that conforms to industry best practices
- DOCTYPE declaration; HTML; head; body; proper syntax, including closing tags and commonly used symbols; comments

#### Understand CSS Fundamentals (15-20%)

- Analyze the impact of using inline styles, internal style sheets, and external style sheets
- When to use inline styles; when to use internal style sheets; when to use external style sheets; precedence when using a combination of inline styles and style sheets
- Construct and analyze rule sets
- Valid syntax for the CSS rule set; selectors, including class, id, elements and pseudo-class
- Construct well-formed style sheets that conform to industry best practices
- Reusing rules and rule sets; commenting; testing on multiple browsers; web safe fonts

#### Structure Documents Using HTML (30-35%)

- Construct and analyze markup to structure content and organize data
- Table tags; h1-h6; ρ; br; hr; div; span; ul; ol; li
- Construct and analyze markup that uses HTML5 semantic elements
- Semantic tags; header; nay; section; article; aside; footer; details; summary; figure; caption
- Construct and analyze markup that implements navigation
- Image links; a; target; bookmark; relative versus absolute links; navigating simple folder hierarchies
- Construct and analyze markup that uses form elements
- Form attributes; action; method; submission methods; accessibility; input types and restrictions; select; textarea; button; output; option; datalist; fieldset

#### Present Multimedia Using HTML (10-15%)

- Construct and analyze markup that displays images
- img and picture elements and their attributes
- Describe the appropriate use of the img, svg, and canvas elements
- Construct and analyze markup that plays video and audio
- Video; audio; track; source; simple iframe implementations

#### Style Web Pages Using CSS (20-25%)

- Construct and analyze styles that position content
- Positioning, including float, relative, absolute, max-width, overflow, height, width, and align; inline versus block; visibility; box model, including margins and padding
- Construct and analyze styles that format text
- Font-family; color; font-style; font-size; font-weight; link colors; text formatting, including text alignment, text decoration, and indentation
- Construct and analyze styles that format backgrounds and borders
- Border-color; border-style; border-width; backgrounds; divs; colors
- Analyze styles that implement a simple responsive layout
- Units of measure; responsive effects with CSS, including viewport and media query; percentages versus pixels; frameworks and templates; max width

Included!

#### **CIW Internet Business Associate**

#### Topics

## Introduction to IT Business and Careers

Information Technology (IT)
IT Job Roles
IT Industry Career Opportunities
Technical Concepts and Training
Technology Adoption Models
Business Modeling

Data Modeling

The Importance of Standards

That's a Hot Site

#### Internet Communication

Communicating via the Internet Modern Web Technologies Social Networking

Messaging Blogging

Communicating Effectively over

the

Internet

Convergence and Unified Communications Technologies Web 2.0 Travel Guide?

#### **Web Browsing**

Introduction to Web Browsing Basic Functions of Web Browsers Installing a Web Browser Web Addresses How Browsers Work Browser Choices

Browsing Techniques Browser Elements

Configuring Web Browser

Preferences

Proxy Servers

Troubleshooting Internet Client Problems

Working the Help Desk



# Introduction to Data Searching Tools

Overview of Databases Introduction to Web Search Engines

Registering a Web Site with a Search Engine

Types of Web Searches

Basic Web Searching Techniques Boolean Operators

Advanced Web Searching

Techniques

Heino Wob S

Using Web Searches to Perform Job Tasks

Unexpected Web Search Results Web Search Strategies

Evaluating Resources

Organizing Internet Research
Citing Copyrighted Online

Resources

To Be Valid or Not to Be Valid?

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#### Introduction to Internet

Technology
Internet Technology
Overview of Networks
Overview of the Internet
Connecting to the Internet
Internet Protocols
Domain Name System (DNS)
Cloud Computing
Computing in the Cloud
Receiving and Viewing E Mail
Messages
E Mail in the Workplace
E Mail Problems and Solutions
Personal Information Management
Mastering the Art of E-Mail

#### **Business E Mail and Personal**

Information Management
Introduction to Business Electronic
Mail (E Mail)
How E Mail Works
E Mail Configuration Requirements
E Mail Message Components
Creating and Sending E Mail
Messages

#### **Protecting Yourself Online**

Introduction to Protecting Yourself Online The Right to Be Forgotten Spam Cookies Configuring Browser Security Authentication Encryption Malware (Malicious Software) Virus Detection and Prevention Spyware and Virus Removal Updates and Patches Locking Your Comp

#### Multimedia on the Web

Introduction to Multimedia on the Web Objects, Active Content and Languages Objects and Security Issues HTML5 vs. Pluq-ins Introduction to Plug-in Technology Data Compression and Decompression Plug-in Installation Types of Plug-ins Firefox Add-Ons Types of Viewers Miscellaneous File Formats Downloading Files with a Browser The Right Tools for the Job Protecting Company Resources Firewalls Security-Related Ethical and Legal Issues Legal Protection

#### IT Project and Program Management

Overview of IT Project and Program Management Resources for Technical Data Project Management Fundamentals Project Management Skills Project Management Phases The Project Triangle Project Management Software Creating Project Schedules **Documenting Projects** Planning and Scheduling Meetings Browsers in the Business World Reviewing Projects Quality Assurance Business Implications of IT Projects Project Management Institute (PMI) Program Management Concepts We Need an Intranet!



# Internet Services and Tools for Business

Internet Resource Tools Mass E-Mail and Texting Services **List Servers** File Transfer Protocol (FTP) Managing Downloaded Files Virtual Network Computing (VNC) Remote Desktop Connection Peer-to-Peer Networks Troubleshooting Using TCP/ IΡ Tools Open-Source Development Proprietary Software and **EULAs** Software Patents These Are Sensitive Files

# BCS Level 3 Certificate in Software Development Context & Methodologies

#### **Syllabus**

#### 1. Business context and market environment (13%, K2)



- 1.1 Understand how similar software development processes and methods are used across a range of industries, but can be based on very different rationale.
- data
- 1.2 Identify the factors that may lead to the development of different information systems within or across a range of industry sectors, including:
- business requirements
- project timescales
- budgets
- resources and skills availability
- product and project risks
- 1.3 Explain why businesses need to keep digital processes up to date and web systems responsive to user needs.
- 1.4 Explain the difference between virtual web based enterprises and companies that use web and digital services with respect to customer and client engagement.

#### 2. Software Development Methodologies (13%, K2)

Recognise that there are different methodologies that can be used for software development.

- 2.1 Identify the main features of sequential development methods and approaches.
- 2.2 Identify the main features of iterative (incremental) development methods and approaches.
- 2.3 Distinguish between the use of different software development methodologies and approaches, considering their suitability and application to the project.
- Agile
- Waterfall



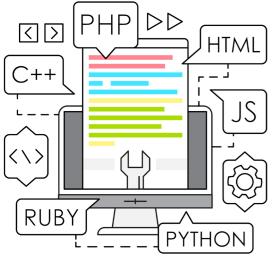


#### 3 Team Roles and Relationships (14%, K2)

Understands the roles within the software development team.

- 3.1 Describe the main roles within software development teams.
- requirements engineer
- business analyst
- software designer
- software developer
- software tester
- software project manager
- software release engineer
- 3.2 Distinguish how the different roles (as listed in 3.1) relate / work with each other and their key accountabilities, in order to complete specific activities and tasks.
- 3.3 Recognise the key external roles and processes that interface to the roles within the software development team (as listed in 3.1).
- customers
- end-users
- operation's processes and personnel
- service management processes and personnel
- 3.4 Recognise that collaborative approaches are especially important in Agile development and Devops practices.

#### 4 Application Structure and Development Platform Context (15%, K2)



Understand the structure of software applications and the particular context for the

development platform (whether web, mobile, or desktop applications).

4.1 Identify the different components that contribute to the underlying architecture of software applications.

- code and libraries
- data
- · application components
- application interfaces
- network and hardware platforms
- reference to the OSI (Open Systems Interconnection) model

4.2 Describe the use of data sources in software applications for storage and retrieval of information.



- 4.3 Explain the features of the following platforms in context of software development, deployment and underlying architecture.
- web
- desktop
- mobile
- server
- cloud
- 4.4 Distinguish the characteristics of software development that are impacted by the deployment of software

#### 5 The Software Development Lifecycle (SDLC) (14%, K2)

Understands all stages of the software development lifecycle.

- 5.1 Recognise that there are several ways to represent the terminology and phases of the SDLC.
- feasibility study
- requirements analysis
- design
- code development
- testing
- deployment / implementation
- maintenance.
- 5.2 Summarise the phases of the SDLC.
- 5.3 Identify the main activities of each of the phases of the SDLC in terms of inputs, activities and outputs.
- 5.4 Recognise the relationship between the phases of the SDLC and the roles within the software development team.





#### 6 Software Testing (19%, K2)

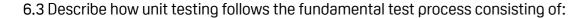
Understand how to test code (e.g. unit testing).

6.1 Recognise why testing is necessary, including principles of:

- early testing
- risk reduction
- conformance to functional and non-functional requirements
- finding and reporting defects
- the difference between testing and debugging

6.2 Summarise the different levels of testing within the SDLC

- unit
- integration
- system
- acceptance



- test planning, monitoring and control, including maintaining traceability between requirements and testing artefacts:
- test analysis and design
- test implementation and execution
- evaluating exit criteria and reporting





6.4 Identify the different types and techniques for software testing that are available and why they would be used, including:

- functional testing
- non-functional testing
- o security
- o performance
- o reliability
- reviews and static analysis
- white box testing (structure-based)
- black box testing (specification-based)

6.5 Recognise the tool types used to support software testing and their main purpose.

- test management
- static testing
- test execution
- performance / load / stress testing



#### 7 Configuration Management and Version Control Systems (12%, K2)

Understand the role of configuration management and version control systems and how to apply them.

7.1 Explain how configuration management tools and techniques are used to control and manage the different software development artefacts through the phases of the SDLC and live operation, including:

- requirements documentation
- code
- test scripts

7.2 Summarise the main features and benefits of version control for the development of code including:

- change history
- concurrent working
- tracking and preventing conflicts
- traceability

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security

7.3 Explain how version control can be used for software and software artefacts.

- that are being developed for use on multiple platforms
- where similar but slightly different versions need to be produced



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#### BCS Level 3 Certificate in Programming

After completion of this vendor qualification, the Apprentice will be able to...

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





# NOW SKILLS THE WEB DESIGNED THE WEB DESIGNED

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

#### Skills the Apprentice will develop...

- Logical and creative thinking skills
- 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
- Maintains productive, professional and secure working environment

#### Career Progression

On completion of this Apprenticeship, job roles that are likely to become available to learners may include but are not limited to:

- 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 and Automated Test Developer



Upon confirming completion of NowSkills' Software Development Technician Apprenticeship, learners are eligible to apply for entry onto the Register of Software Development Technicians



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## **Next Step**

If you would like to register for a Software Development Technician Apprenticeship, please visit: <a href="https://nowskills.co.uk/apprentices/getting-started/register/">https://nowskills.co.uk/apprentices/getting-started/register/</a>

If you are an employer and you are interested in employing a Software Development Technician apprentice or your are interested in enrolling your existing employees onto the Apprenticeship please contact visit us: <a href="https://nowskills.co.uk/employers/nowskills-you/callback-request/">https://nowskills.co.uk/employers/nowskills-you/callback-request/</a>

# Case Studies

We are proud to share with you our latest successful IT Apprentice Case Studies! Check out our successful IT Apprentices...



Conoll's Story

Connoll's Story



Rachel's Story



**Chris' Story** 

## Feedback

**Arsham's Story** 

Are you delighted or dissatisfied with NowSkills' performance? Did you know that you can send us an email with your comments directly to our Customer Experience Team?

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