**Software Development L3 -Matrix**

**Candidate Name**: **Date**: **IQA Name**:

**Coach name:**

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| --- | --- | --- | --- | --- |
| **The Competency Standards** | **Definition of the Minimum Requirement** | **Evidence**  **Comment** | **Comments** | **Comments** |
| LO2 HOW  2.1  Apprentices can demonstrate the full range of skills, knowledge and behaviours required to fulfil their job role | * + 1. Knows what skills, knowledge and behaviours are needed to do the job well     2. Are aware of their own strengths in the job role, and any areas for improvement Appreciate who else is important, for them to do their job and fulfil the role effectively (e.g. colleagues, managers, other stakeholders)     3. Are aware of potential risks in the job role (e.g. security, privacy, regulatory)     4. Use personal attributes effectively in the role, e.g. entrepreneurship     5. Understand how the job fits into the organisation as a whole |  |  |  |
| 2.2  Apprentices can demonstrate how they contribute to the wider business objectives and show an understanding of the wider business environments | * + 1. Understands the goals, vision and values of the organisation     2. Aware of the commercial objectives of the tasks/ projects they are working on Understands the importance of meeting or exceeding customers’ requirements and expectations Is in tune with the organisation’s culture     3. ware of the position and contribution of the organisation in the economy     4. Understands the key external factors that shape the way the organisation function, e.g. regulation     5. Knows how the organisation can gain advantage in the industry, e.g. through innovation, technology, customer service etc |  |  |  |
| 1.1 WHATS  **Logic:** | Write code following an appropriate logical approach to agreed standards (whether web, mobile or desktop applications)  1.1 Apprentices can write code to achieve the desired functionality using the appropriate tools and methods applicable to their organisation |  |  |  |
| 1.2  **Security:** applies appropriate secure development principles at all stages of development | * + 1. Apprentices can apply **security principals** to all work within the development lifecycle     2. Apprentices understand **the importance of up to date software** |  |  |  |
| 1.3  **Development support**: applies industry standard approaches for configuration management and version control to manage code during build and release | * + 1. Apprentices understand **the business context and drivers** during development     2. Apprentices can communicate with customers, internal and external, to explain their work with the appropriate language relevant to their audience        1. **Internal**        2. **External**     3. Apprentices understand the importance of **version control** at every stage within the development lifecycle |  |  |  |
| 1.4  **Data**: makes simple connections between code and defined data sources as specified | * 1. Apprentices can link to a range of database types and embed data queries within their code |  |  |  |
| 1.5  **Test**: functionally test that the deliverables have been met or not | * + 1. Apprentices can test and analyse their code to identify errors as soon as possible in the coding process and on an interactive basis     2. Apprentices can design manual tests for their product     3. Apprentices understand expected results and acceptance criteria during testing |  |  |  |
| 1.6  **Analysis:** follows basic analysis models such as use cases and process maps | * + 1. Apprentices can read and understand data to ensure they know and can meet the customers’ requirements     2. Apprentices can identify and represent required functionality (e.g. use cases) Apprentices can identify and represent activity workflow (e.g. process maps) |  |  |  |
| 1.7  **Development lifecycle**: supports the Software Developers at the build and test stages of the software development lifecycle | * + 1. Apprentices can work as part of a team that understand their process within the development lifecycle     2. Apprentices can show initiative during development and take responsibility for their own work     3. Apprentices can work flexible to assist with other member of the team during development |  |  |  |
| 1.8  **Quality**: follows organisational and industry good coding practices (including for naming, commenting etc.) | Apprentices can identify and follow standards and good practice that can improve programming efficiency, style and quality, including:   * + 1. programming standards, both organisational and external     2. generic best practices including readability, reusability, maintainability     3. best practice approaches of different paradigms and language |  |  |  |
| 1.9  **Problem solving:**  Solves logical problems, seeking assistance when required (including appropriate mathematical application)  Responds to the business environment and business issues related to software development | * + 1. Apprentices **can use at least one problem solving tool and technique** to identify and resolve programming issues        1. A-        2. B-     2. Apprentices can apply structured problem-solving methods     3. Apprentices can apply problem-solving techniques to programming activities     4. Apprentices can demonstrate they know how and where to seek assistance dependent at what stage of development is appropriate |  |  |  |
| 1.10  **Communication**  Clearly articulate the role and function of software components to a variety of stakeholders (including end users, supervisors etc.) | The apprentice should be able to use a **minimum of 3 tools to communicate**   * + 1. Oral     2. Face-to-face     3. Remote     4. Diagrammatic     5. The apprentice should be able to document work done in accordance with agreed procedures     6. The apprentice must be able to **explain 3 types of communication styles to ensure cultural awareness and appropriateness** for customer is taken into account        1. A        2. B        3. C |  |  |  |
| 1.11  **Business Operation**  Operates effectively in their own business’s, their customers’ and the industry’s environments | * + 1. Apprentices can demonstrate working within operational requirements such as        1. **health and safety,**        2. **budgets,**        3. **brands** and        4. **normal business protocols** |  |  |  |
| 1.12  **User Interface**  develops user interfaces as appropriate to the organisations development standards and the type of software development being undertaken | * + 1. Apprentices understand the fundamental concepts of human-computer interaction or user experience design, the development practices leading to a high-quality user interface, and the programming techniques required to construct a graphical user interface     2. Apprentices understand how to interact with screen or UI designers to ensure the logic layer integrates with the user interface     3. Apprentices understand how to interact with testers to optimise the user interface |  |  |  |
| **Overall Feedback:**  Feedback-  Please see table above for modular guidance on required evidence to meet Standards  Additional evidence is required in the following modules:   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | **0%** | | 1.7 | 1.8 | 1.9 | 1.10 | 1.11 | 1.12 |  |   **Please add the new additional evidence to the current portfolio or relevant project or add to a new document, but please indicate where the evidence can be found to be checked.** | | | | |
| 2.3  Apprentices can demonstrate the ability to use both logical and creative thinking skills when undertaking work tasks, recognising and applying techniques from both. | **Logical thinking:**   * + 1. Understands initial premise(s) and preconditions     2. Recognises the conclusion to be reached     3. Proceeds by rational steps     4. Evaluates information, judging its relevance and value     5. Supports conclusions, using reasoned arguments and evidence   **Creative thinking**:   * + 1. Explores ideas and possibilities     2. Makes connections between different aspects     3. Adapts ideas and approaches as conditions or circumstances chang     4. e |  |  |  |
| 2.4  Apprentices can show that they recognise problems inherent in, or emerging during, work tasks, and can tackle them effectively | **Problem-solving**:   * + 1. Analyses situations     2. Defines goals     3. Develops solutions     4. Prioritises actions     5. Deals with unexpected occurrences |  |  |  |
| 3.1  Apprentices can manage relationships with work colleagues, including those in more senior roles, customers/clients and other stakeholders, internal or external and as appropriate to their roles, so as to gain their confidence, keep them involved and maintain their support for the task/project in hand | Apprentices can establish and maintain productive working relationships, and can use a range of different techniques for doing so.  **Managing relationships:**   * + 1. Understands the value and importance of good relationships     2. Influences others by listening to and incorporating their ideas and views     3. Acknowledges other people’s accomplishments and strengths     4. Manages conflict constructively     5. Promotes teamwork by encouraging others to participate   **Customer/client relationships:**   * + 1. Understands their requirements, including constraints and limiting factors     2. Sets reasonable expectations     3. Involves them in decisions and actions     4. Interacts positively with them     5. Provides a complete answer in response to queries (‘transparency’, ‘full disclosure’)   **Stakeholders:**   * + 1. Understands who they are and what their ‘stake’ is     2. Prioritises stakeholders in terms of their importance, power to affect the task and interest in it     3. Uses stakeholders’ views to shape projects early on     4. Gains support from stakeholders, e.g. to win resources     5. Agrees objectives |  |  |  |
| 3.2  Apprentices can communicate effectively with a range of people at work,   * one-to-one * and in groups, * in different situations * and using a variety of methods. | **Intention/purpose:**   * + - 1. Understands the purpose of communicating in a particular situation or circumstance (e.g. inform, instruct, suggest, discuss, negotiate etc.)       2. Checks that the person/people with whom one is communicating also understand the purpose       3. Is sensitive to the dynamics of the situation       4. Is aware of anything that might disrupt the effectiveness of the communication (e.g. status, past history)  1. **Method:**     * + 1. Chooses a good, appropriate method for the situation        2. Aware of the limitations of the chosen method, and the possible risks of miscommunication (e.g. ambiguity)        3. Takes account of the affective dimensions of the method (e.g. body language, tone of voice, eye contact, facial expression etc.) 2. **Execution**:    * + 1. Expresses self clearly and succinctly, but not over-simplifying        2. Checks that the other person/people understand what is being expressed        3. Takes account of the potential barriers to understanding (e.g. filtering, selective perception, information overload)        4. Modifies the purpose and methods of communication during a situation in response to cues from the other person/people |  |  |  |

**Further Comments:**