**SKILLS ASSESSMENT – SOFTWARE DEVELOPMENT TECHNICIAN L3**

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**Technical Question**

Describe a time when you have: (or if no example explain how you would do it):

Used a coding language to develop software or create a website – explain all of the steps in the process.

Using the standard development lifecycle, explain:

* Requirement gathering and analysis.
* Design.
* Implementation or coding.
* Testing.
* Deployment.
* Maintenance

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| First, I clearly defined the requirements which was to create an object-oriented game with a help section to demonstrate how to design build and test a program using OOP techniques. The scope of the project which was two weeks to create the game and have a score which would keep track f the players total wins as well as being able to play the game with no errors. I chose to create a simple tic tac toe game:  I created interface design, data dictionaries with the data types and variable names. I also created class diagrams and sequence diagrams to illustrate the behavior of the program. I made sure that I was sticking to the requirements and specification so that the software would be created as wanted by the client.  Then implementing the code by using C# in Visual Studio creating a Windows form; adding controls from the toolbox such as buttons which would be used as the tiles and a reset button for the game. I also included labels to show the score and which of the players turn it would be. and using the properties tab to change the name of. In the code I made sure that there were comments to remind me or someone in the future of what a procedure, function would do. Creating the classes were not difficult as the design. For the help section I included a menu strip item in which the user could change between the game and help form. For the help form I picture box with an image of the main form  I tested the code using Whitebox testing; using the debugging tools in Visual Studio such as using breakpoints, step into and step over were used to test functions. Additionally, I tested the software using Blackbox testing in which the test would be done from the user’s perspective and a detailed record of what happened was recorded in a table. After testing, I analyzed the results against the expected results to identify any discrepancies. For instance, the reset button on the form did not have any effect when clicked, I knew the code for clicking the button was created therefore I checked the properties tab and fount the event for clicking the button was not added.  For tracking defects and future modification, I created a document which included the user’s requirements, program specification, program design including screen components and their controls labelled. I also included the test plan and results as well as known issues with the program. As there were no known issues, I included other features that could be added. |

Do you have any supporting evidence you would like to provide to strengthen your application?

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