Student Written Assessment (Portfolio)

Business Unit/Work Group	IT Studies		
Qualification Code	National Code: ICA50115	Qualification Title	Diploma of Software Development
Unit Code/s		Unit Title/s	
Assessment Task Title	Portfolio		
Student Name	Submit your solution via your LEARN account	Student SIS ID	Submit your solution via your LEARN account
Assessor Name	You have been added to a LEARN group which defines your assessor. This is normally your Course Registration Number (CRN) lecturer.	Date	2019 Semester 2

Student Guide for Written Assessment (Assignment)	

Overview of Assessment	You're a required to collect a series of evidence into a portfolio. The portfolio evidence will be collected in OneNote and your lecturer will provide access to your personal OneNote area. This portfolio is comprised of the following sections:
	    Project Focus Section (Overview of User Requirements)
	    Detailed User Requirements Focus Section
	    Analysis & Design Focus Section
	    UI and Code Development Focus Section
	    Database Focus Section
	    Code Quality Focus Section
	    Testing Focus Section
	    Knowledge Section

Task/s to be assessed	This assessment will require you to submit evidence for each of the portfolio sections according to the requirements detailed below.
Time allowed	You have 2 semesters to gather the evidence required for this portfolio. The final submission date for this assessment is provided in the LEARN course and summarized in the Assessment Documents & Submissions Links topic in LEARN.
Location	You must complete this assessment based on the experiences and project during your time working in the TAFESA IT Studies virtual business, ITWorks. Any evidence from experiences in a real workplace (self-sourced) can also be included.
Decision making rules	To receive a satisfactory outcome for this assessment you must complete all parts at a satisfactory level.
Assessment conditions	You must include evidence from your work in the simulated IT Studies Workplace, ITWorks. Any gaps in evidence from the ITWorks experience can be supplemented by evidence from any other source that meet the requirements, such as a real work place.
Resources required	To complete this assignment, you will need to have access to a PC with an Internet connection, Microsoft Office 365, and access to the ITWorks organization documents, templates and software. Windows based machines and an Internet connection are provided in your practical classes. All ITWorks resources are provided via cloud storage (OneDrive).
Results/Re-assessment	You will be provided feedback for each part of the assessment and be given the opportunity to resubmit with any required components only once.

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Overview

You're a required to collect a series of artefacts and details of your experiences that could be used for an online portfolio. The items for your portfolio will be collected in OneNote and your lecturer will provide access to your personal OneNote area. This can then form the basis of the artefacts to use to produce a public facing portfolio in a professional and high-quality format, however this version of the portfolio is not a requirement of this subject. It is however highly recommended as many employers are now seeking such evidence as part of their applicant selection processes.

The underlying aim of this subject is for you to experience IT work in a workplace performing typical tasks related to your qualification, bringing together the skills and knowledge you have gained through your other subjects. You will need a minimum of 140 hours of workplace experience (4 weeks full time equivalent) undertaking an appropriate project to have sufficient artefacts for your portfolio**.** Your workplace experience will be based on the IT Studies Virtual business – *ITWorks*. Of the 140 hours, you are required to spend a minimum of 56 hours over a 12 month period at the workplace (ITWorks premises – Innovation centre, Rooms B.B02, B.B03). The remaining hours will be based on client contact and work done outside of the ITWorks premises. All work done should be reflected in your Weekly Journal entries.

Your *ITWorks* role is to complete the allocated project following the *ITWorks* agile project development approach. You will also be required to review a project, this could be the one you developed or one by another *ITWorks* colleague.

You will be allocated to a project within *ITWorks* at your first attendance. You must follow the business expectations, standards and procedures of *ITWorks*.

Whilst working in your virtual placement you must gather evidence to enable you to meet the portfolio requirements detailed below.

When a portfolio item requires you to provide a description these should be no more than 2 paragraphs, similar to what you would include in a resume.

In some situations, your ITWorks project may not provide enough experience for some areas that are required in the portfolio. In this case, and this case only, you may use any other artefacts/experiences from a suitable work experience you have done or other IT Studies subjects. **Any artefacts that are expected outcomes related to your ITWorks project must come from that project, they cannot be substituted with examples from previous subjects.**

All project files must be uploaded to the OneDrive ITWorks folder. Please ask your supervisor (your lecturer) to create a folder for your project and give you (and your team) read/write access.

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1. Project Focus Section (Overview of User Requirements)

1.1 A problem definition document of your ITWorks project with client sign-off (**one document per group**). For more information on what this would contain see the *ITWorks Problem Definition Template* (located in the ***ITWorks*** folder)

1.2 Evidence of feedback about the Problem Definition by the ITWorks Technical Lead – Project Management. This can be via email, written or audio/video.

1.3 A Project Charter that clearly shows the planned scope and extent of the testing aspects of the project (**one document per group**). For more information on what this would contain see the *ITWorks Project Charter Template* (located under the ***ITWorks*** folder)

1.4 Evidence of feedback about the Project Charter by the ITWorks Technical Lead – Project Management. This can be via email, written or audio/video.

1.5 Evidence of sign-off on Project Charter by ITWorks Technical Lead – Project Management.

Note, only provide final versions of the Problem Definition and Project Charter, this will include any changes suggested by the ITWorks Technical Lead – Project Management.

2. Detailed User Requirements Focus Section

2.1 **Recordings of at least 2 interactions with your client related to requirements** (**Two recordings per group**).

2.2 At least one System Requirements Specification Document (**one document per group**), with customer sign-off. For more information on what this would contain see the *ITWorks SRS Template* (located in the ***ITWorks*** folder)

2.3 At least two use cases from your project (***at least one per group member***).
For more information on what this would contain see the *ITWorks Use Case Template* (located in the ***ITWorks*** folder)

2.4 Review of Requirements of an existing project (**this needs to be completed individually**).
For more information on what this would contain see the *ITWorks Review Requirements* Template (located in the ***ITWorks*** folder)

2.5 Evidence of sign-off of System Requirements Specification Document and use cases by ITWorks Technical Lead – Requirements

3. Analysis & Design Focus Section

3.1 **A video of you walking through your design approach. The Video presentation would need to be between 5 and 15 minutes. Typically, you would explain your class diagram and at least one major sequence diagram. This needs to be completed individually.**

3.2 At least one Class Diagram of a project you worked on (preferably your *ITWorks* project) involving at least 4 classes.

3.3 At least one Sequence Diagram you worked with, preferably related to the use cases presented in the requirements section.
For more information on what this would contain see the *ITWorks Software Architecture Template* (located in the ***ITWorks*** folder)

3.4 At least one review of an existing project design. **This needs to be completed individually.**
For more information on what this would contain see the *ITWorks Review Design Template* (located in the ***ITWorks*** folder)

3.5 Evidence of sign-off of software architecture document by ITWorks Technical Lead – Architecture

4. UI Focus Section

4.1 **A video of you walking through an initial prototype or proof of concept demonstration. The Video presentation would need to be between 5 and 15 minutes. It is preferable if this is done with the client as you show them the first sprint outcome. This needs to be completed individually.**

4.2 **A video of you walking through of the final UI. The Video presentation would need to be between 5 and 15 minutes. This needs to be completed individually.**

4.3 Evidence of client sign off approving the original prototype and updated prototype**.**
For more information on what this would contain see the *ITWorks Sprint Prototype Sign off Template* (located in the **ITWorks** folder). *Two documents required, one for the Original and one for the Updated Prototype*

4.4 Evidence of final client sign off.
For more information on what this would contain see the *ITWorks Final Product Sign Off Template* (located in the **ITWorks** folder)

5. Database Focus Section

5.1 **A video of you walking through the Tables and Relationships of the database you used. The Video presentation would need to be between 5 and 15 minutes. This needs to be completed individually.**

5.2 The ER diagram of a database you have worked with in your IT Works Project. You must provide an explanation (a paragraph) commenting on the technical quality of the database design. **This needs to be completed individually.**

5.3 Evidence of sign-off by ITWorks Technical Lead – Database

6. Coding Focus Section

6.1 **A video of you walking through the code you have written explaining at least one algorithm or approach taken in a part of the coding. The Video presentation would need to be between 5 and 15 minutes. It is suggested you use the debugging stepping facility to walk through a section of the code explaining what is going on. This needs to be completed individually.**

6.2 Snippets/screen shots of your use of debugging tools during code fixes (e.g. stepping, break points, setting watches). **This needs to be completed individually.**

6.3 A link to your source code on the *OneDrive ITWorks folder.*

6.4 Evidence of sign-off of code by ITWorks Technical Lead – Code (as per language used)

7. Code Quality Focus Section

7.1 **Technical walkthrough of you using the static analysis tools within the IDE of your project. This will need to be a Video presentation between 5 and 15 minutes. This needs to be completed individually.**
Tools used could be:
- o *Visual Studio code check options*
- o *Android Studio code check options*

7.2 At least one review of an existing projects code. **This needs to be completed individually.**
For more information on what this would contain see the *ITWorks Review Code Template* (located in the *ITWorks* folder)

8. **Testing Focus Section**

   8.1 **Create a video (minimum of 5 minutes) to demonstrate the following:**
   - **Building the necessary infrastructure to prepare for testing (e.g. Database connection to test data), Junit/NUnit setup/routines**
   - **Explaining the setup of the test data (e.g. select appropriate data)**
   - **Demonstrate at least one automated test, that is, a test that can be easily redone when code changes are made. This demonstrates an automated approach to regression testing.**

   This needs to be completed individually.

   8.2 At least one Test Plan you were involved in. **This needs to be completed individually.**
   For more information on what this would contain see the *ITWorks Test Plan Template* (located in the ***ITWorks*** folder)

   8.3 At least one review of an existing projects test plan and test cases. **This needs to be completed individually.**
   For more information on what this would contain see the *ITWorks Review Testing Template* (located in the ***ITWorks*** folder)

   8.4 At least 2 test cases completed by you. **This needs to be completed individually.**
   At least one test case should have a failed result and then demonstrate the corrections made in order to change to a successful result.

   8.5 Evidence of sign-off of test plan by ITWorks Technical Lead – Testing

9. **Knowledge Section**

   These questions need to be completed individually.

   9.1 A description of experiences and understanding of the characteristics of the main programming language used in your ITWorks project.

   9.2 A description of your experiences and/or understanding of the various aspects of a system, include – network, operating systems, database, web servers and application servers

   9.3 A description of your understanding and experiences in using UML

   9.4 A description of current software development methodologies you have used, including your experience and understanding of the SDLC in an agile approach in small size applications and how it relates to the ***waterfall model***.

   9.5 A description of your experience and understanding of using an Object-Oriented programming approach

   9.6 A description of your experience and understanding of the software development tools available, include at least one open-source tool.