# Skills Assessment

## Criteria

### Unit code, name and release number

ICTPRG418 – Apply Intermediate Programming Skills in another Language  
ICTPRG523 – Apply Advanced Programming Skills in another Language

ICTICT403 – Apply software developments methodologies  
ICTPRG529 – Apply testing techniques for software development  
ICTPRG520 – Validate an application design against specifications

### Qualification/Course code, name and release number

ICT50718 – Diploma of Software Development

## Student details

### Student number

808457598

### Student name

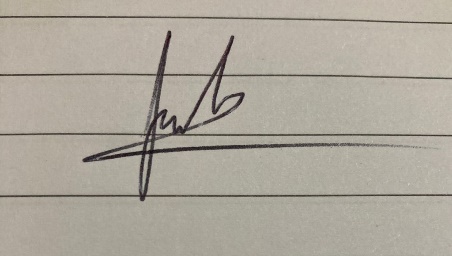
Julie Lam

## Assessment Declaration

* This assessment is my original work and no part of it has been copied from any other source except where due acknowledgement is made.
* No part of this assessment has been written for me by any other person except where such collaboration has been authorised by the assessor concerned.
* I understand that plagiarism is the presentation of the work, idea or creation of another person as though it is your own. Plagiarism occurs when the origin of the material used is not appropriately cited. No part of this assessment is plagiarised.

### Student signature and Date

Julie Lam 7th June 2021



Version: *1.0*

Date created: *3 July 2018*

Date modified: *07/06/2021*

For queries, please contact:

*SkillsPoint*

*Location*

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RTO Provider Number 90003 | CRICOS Provider Code: 00591E

This assessment can be found in the: [Learning Bank](https://share.tafensw.edu.au/share/access/searching.do?doc=%3Cxml%2F%3E&in=P7ac4831b-430a-4b8d-8b56-f7b32ed5b9cf&q=&type=standard&sort=rank&dr=AFTER)

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your skills as would be  in the following areas:   * Collecting and organising User requirements * Using a software development methodology (Object Oriented methodology) * Designing Applications using Layers * Working with C# * Working in Visual Studio * Testing and Debugging Software Applications * Validating and documenting Software * Selecting and re-using components. * Designing for localisation and globalisation * Working with the Entity Framework |
| **Assessment Event number** | 1 of 3  This is the project assessment. There are still two theory exams to complete this cluster. |
| **Instructions for this assessment** | This is a skill-based assessment and will be assessing you on your ability to demonstrate skills required in the unit. |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your assessor for marking.  Ensure you have written **your name** at the bottom of each page of this assessment.  It is important that you keep a copy of all electronic and hardcopy assessments submitted to TAFE and complete the assessment declaration when submitting the assessment. |
| **What do I need to do to achieve a satisfactory result?** | To successfully complete this assessment the student will be available at the arranged time to complete all the assessment criteria as outlined in the assessment instructions. |
| **What do I need to provide?** | Computer, Printer, Draw.io, MS Office, Access to Moodle Resources/Workbook, Visual Studio, MS SQL Server |
| **Due date/time allowed/venue** | **4th December, 2020** |
| **Assessment feedback, review or appeals** | Appeals are addressed in accordance with Every Students Guide to Assessment. |

## Specific task instructions

The instructions and the criteria in the tasks and activities below will be used by the assessor to determine whether the tasks and activities have been satisfactorily completed. Use these instructions and criteria to ensure you demonstrate the required skills and knowledge.

If this assessment requires you to record information, your assessor will provide you with an appropriate documents/templates.

**Assessment Overview**

**Scenario:**

**Tafe offers hundreds of courses (from certificate to degree level), to over 500,000 students at various locations. These coursed are offered in three modes: full time, part time and online. It employs staff including teachers who are required to teach at various locations. All the staff are allocated a user id and password and an email address. The data for the organisation and students is stored in a database which can be queried for most business requirements.**

**The process starts with enrolling the students for courses by making a payment which varies from course to course. The students are informed about their successful enrolments with the timetable which spells out the time and locations of the classes and the teachers teaching the courses. The courses are partitioned into clusters of units/subjects. A unit may belong to more than one course. The unit(s) assignments and various resources are stored online which students can download and upload their completed assessments. The assessments are assigned due dates for completion. The assessments can consist of projects and theory exams. The assessments are marked, and the results are kept online.**

**The students can access this online application using their user id and password. The students are allocated a student id and an email address at the time of enrolment. A student can enrol in more than one course in one semester. At the end of the course the students are informed of their results. The students are allowed to defer their courses and resume it in the future.**

**Business Rules:**

**1. A student can enrol in two courses in the same semester. The enrolments must be at the same college.**

**2. A student may not be enrolled in a semester**

**3. A course can be taught at more than one college/location.**

**4. A college/location can run at more than one course.**

**5. A teacher can teach more than one course and a course can be taught by more than one teacher**

**6. A course consists of clusters of units and a teacher is assigned to a cluster**

**7. A unit can appear in in many courses**

**8. A course can run at more than one location and a location may run more than one course**

**9. A course runs over one semester and each semester consists of two terms (9 weeks each)**

**~~10.A course consists of core and elective units~~**

**~~11.A cluster of units may consist of core and elective units~~**

**12.A teacher can only teach one cluster in a course**

**13.To pass any unit, all the assessments associated with the units must be passed**

**You have been asked to design and develop this application in the windows environment using C# and relational database. This application should address at minimum the following business requirements:**

1. **Display all the courses and locations for a teacher teaching the courses any semester.**
2. **Display all the courses which are not offered in any semester.**
3. **Display all the units/subjects which are not allocated to any course in any semester.**
4. **Display cluster units for any course and semester.**
5. **Display history of all the courses a teacher has taught in the past.**
6. **Display all the teachers based on a particular location.**
7. **Display results of any student for a course and semester.**
8. **Display enrolments of any student for a course and semester.**
9. **Display timetable for a course being offered at all locations.**
10. **Display a list of all part time teachers for a semester and location.**
11. **Display students who have enrolled but have not paid the fees.**
12. **Display part time/full time students for a semester and location**
13. **Display all the full time teachers who are teaching at locations other than their based location.**

**This application must address at minimum the following:**

1. **~~Technical Requirements~~**
2. **~~Functional and Non-Functional Requirements~~**
3. **~~Business Requirements~~**
4. **~~User Scenarios and Persona~~**
5. **~~Use case Modelling~~**
6. **~~Domain Modelling~~**
7. **~~ERD~~**
8. **~~System Architecture~~**
9. **~~Conceptual and Concrete UI Design~~**
10. **~~Storyboards generated from the User Scenarios~~**
11. **~~Prototype UI design for both, front and back end system~~**
12. **~~Unit, integration, and system testing~~**

**Note: documentation must be professionally designed with a table of index and a clear separation between the header and answers. (e.g. Headers are heading One, Sub heading are heading Two followed by paragraphs etc...) Documentation without correct formatting and table of index will be rejected.**

**Development Technology Requirements**

1. **System must use the Entity framework**
2. **System must be developed using three-layer architecture (Model Layer, Business Layer and Client Layer)**
3. **System must meet all requirements and handed over to the client by the due date.**
4. **Code must be clearly documented without any spelling or grammatical errors.**
5. **All data must be stored in a relational DBMS**
6. **You may elect to build the front end (Client) using any of the following technologies**
   1. **WPF**
   2. **Windows Forms**
   3. **Web**
   4. **Mobile**
   5. **Console Application (UNACCEPTABLE)**
7. **Is it recommended (Optional) a repository on Git be setup up to easily manage and update file revisions. Here is a link to learn more.**<https://guides.github.com/activities/hello-world/>

**Documentation and Validation**

1. **Develop a Test Plan document for the system. You may use one of the templates provided in the Reports and Templates folder on Moodle or develop your own using** [How to Create a Test Plan with Examples](https://www.guru99.com/what-everybody-ought-to-know-about-test-planing.html) **.**
2. **Develop a basic user manual illustrating how to use this application , how to use the dashboard and how an administrator will add, edit, delete and view events, produce reports (Optional: implement a feature that allows the management the ability to export reports out of the system to a PDF).**

**Note!**

**This feature is not about cutting down on the level, quantity and quality of work or changing the case study. You will still be required to carry out all the activities to complete the system development. This feature is about what your teacher can do to help you develop your system analysis and development skills. There is absolutely no use developing something that does not help you learn by cutting and pasting code, using other developers work, etc... at the same time there is nothing wrong with learning from other developers, only on the condition that you benefit from that learning and you are able to apply that skill to your project. Therefore, plagiarism will be treated very seriously, any learner found to have ripped off code, resources or other work, whether in class, online or from any other means, will result in automatic dismal.**

## Deliverables

1. A Zip file containing visual Studio Solution including all resources, database file, image etc you have made use of in the project named **firstNameLastName.zip**.
2. TestPlanTafe.pdf (do not zip)
3. Software Diploma Major Project.docx completed with your learner number, signature and dated (do not zip)

## Assessment Feedback

*NOTE: This section* ***must*** *have the assessor signature and student signature to complete the feedback.*

### Assessment outcome

Satisfactory

Unsatisfactory

### Assessor Feedback

Was the assessment event successfully completed?

If no, was the resubmission/re-assessment successfully completed?

Was reasonable adjustment in place for this assessment event?  
*If yes, ensure it is detailed on the assessment document.*

Comments:

### Assessor name, signature and date:

### Student acknowledgement of assessment outcome

Would you like to provide feedback about this assessment?

### Student name, signature and date

***NOTE: Make sure you have written your name at the bottom of each page of your submission before attaching the cover sheet and submitting to your assessor for marking.***