**Assessment Practical/Observation**

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| **Student Name** | | Toton Liantoro | | **CIT Number** | 241675 | |
| **Competency Title, Code and Banner Code**  **CRN** | | ICTPRG532 – Apply advanced object-oriented language skills, INFT1033.  14126 | | | | |
| **Assessment Type** | | In the workplace  Simulated environment  Other | | | | |
| **Assessment Name** | | **Assessment 2** | | | | |
| **Assessment Date** | | Handed out Friday 9 September. Due Thursday 13 October. | | | | |
| **Student Statement:** This assessment is my own work. Any ideas and comments made by other people have been acknowledged. I understand that by emailing or submitting this assessment electronically, I agree with this statement. | | | | | | |
| **Student Signature** | | Not required for electronic submission | | **Date** | 13 October 2022 | |
| **PRIVACY DISCLAIMER:** CIT is collecting your personal information for assessment purposes. The information will only be used in accordance with the CIT Privacy Policy. | | | | | | |
| **Assessor Feedback (also complete observation checklist and questions on the last page)**  Feedback will be provided via the assessment upload link.  ❑ **Student provided with feedback** | | | | | | |
| **Attempt 1** | | **Satisfactory** | **Not Yet** **Satisfactory** | | **Date** | / / |
| **Attempt 2** | | **Satisfactory** | **Not Yet** **Satisfactory** | | **Date** | / / |
| **Assessor Name** | Don Coutts | | **Assessor Signature** | |  | |

**Information for Students:** You may have two (2) attempts for this assessment.

* If your **first** attempt is not successful, your teacher will discuss your results with you and will arrange a second attempt.
* If your **second** attempt is not successful, you will be required to re-enrol in this unit.

Only one re-assessment attempt will be granted for each assessment item, with the exception of Apprentices or Trainees who are permitted an additional supplementary assessment if necessary.

**Time Allowed**: Five weeks.

**Materials Provided by Assessor:** This document, notes in Sessions 5 and 6, material in *Additional Resources*.

**Materials and Equipment to be Supplied by the Student:** This entire document with student name, ID, and date filled in, plus the completed tasks listed on page 3. Submissions that don’t include all this information cannot be marked.

**Assessment Range and Conditions**:

Additional time will be allocated to students who are registered with student support.

Access to techniques: Open book, student notes, subject material on eLearn, this handout.

**Assessment Criteria:**  This assessment must be done individually. To achieve a Satisfactory result, your assessor will be looking for your ability to demonstrate the specific performance skills detailed below to industry standard.

You must submit your completed assessment **in a single zip file titled Assessment 2** to the Assessment 2 link in the Assessment block.

Your zip file MUST include this **entire document** with your details (name, ID, and date) on page 1 filled in.

Submissions without this document included cannot be marked.

Please do not convert this document to PDF or any other format.

**Assessment 2 - specific performance skills required**

You are required to build a multi-form Windows Forms application in C#. This will comprise a Main form with a menu that passes control to each of three forms (i. e. one form for each of the requirements stated in paragraphs 1, 2, and 3 below). You should state what operations each form covers in the comment block for each form.

The menu on the main form should also include a *Help/About* option that will display a MessageBox containing your name, CIT ID, and the Assessment title.

You must ensure that you cover **all** the skills listed below, and the apps you submit **MUST** be predominantly your own work and not completely copied from elsewhere. Code sourced from other sources must be acknowledged in the Comments block on the code page.

1. **2D graphic**

Design a form that displays a 2D graphic of a simple everyday object, (a house with windows, a vehicle, etc.). You must do this using the code we covered in Session05.

1. **Drag and drop**

Design a form that includes the drag-and drop operation of a file from Windows Explorer that will display an image in a PictureBox control. You must do this using the code we covered in Session05.

1. **Doubly-linked list**

Design a form that uses a doubly-linked list that will hold each character in the name of the suburb where you live, one character per node.

The name of your suburb must be keyed into a text box on the form, and then converted to an array of *characters*. Each character in the array is then to be added in turn to the front of the doubly-linked list. When all the characters have been entered to the list, the contents of the list must be displayed in a label: first, in the forward direction, and then in the backward direction. This will be achieved through two appropriately named buttons on the form. (Hint: see the entry in *Additional Resources* for how to use string functions in C#).

**NOTE: You must use a doubly-linked list for this form, not a List<T> Collection. (We covered doubly-linked lists in Session06).**

1. **Include a simple Help file based on a Windows forms app.**

Use HelpNDoc (we covered this in Session05) to develop a small Help file in either HTML or PDF format to explain the key functions of an app that you have written. (You could use the single-form app you developed for Assessment 1 for this).

1. **Utilise a version control system.**

You will need to take a JPEG screen shot, with your mobile phone or specialist software, to demonstrate that you have implemented and are using a version control system in VS 2022 (we covered this in Session05). This should include some code that you have written that includes your name in a comment block, but it must be shown as an entry in GitHub.

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| **Observation Checklist (to be filled in by Assessor)**  **During the demonstration of skills, did the student satisfactorily:** | **Attempt 1** | | **Attempt 2** | |
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| **ICTPRG532 Apply advanced object-oriented language skills** | **S** | **NYS** | **S** | **NYS** |
| 1. Implement a GUI app with 2D graphics. |  |  |  |  |
| 1. Implement a GUI app with drag-and-drop. |  |  |  |  |
| 1. Implement and use a dynamic data structure – doubly-linked list |  |  |  |  |
| 1. Develop a simple Help file based on a Windows Forms app. |  |  |  |  |
| 1. Utilise a version control system. |  |  |  |  |