|  |  |  |  |
| --- | --- | --- | --- |
| **Qualification details** | | | |
| **Training Package Code and Title** | ICT - Information and Communications Technology (Version 8.0) | | |
| **Qualification National Code and Title** | ICT50220 Diploma of information Technology (Release 2) | **State code** | BGJ4 |
| **Assessment Title** *(as per DAP)* | Assessment Task One (Individual Project) | | |
| **Unit National Code & Title** | ICTWEB513 Build dynamic websites | | |
| ICTWEB514 Create dynamic web pages | | |
| BSBXTW401 Lead and facilitate a team | | |

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| --- | --- | --- | --- | --- | --- | --- |
| **Date Due** | Week Ten | | **Date Received** | |  | |
| **Student Name** | Kyle Watson | | | | | |
| **Student Declaration** | I declare that the evidence submitted is my own work: | | | | | |
| **Assessor Name** |  | | | | | |
| **Assessment Decision** | Satisfactory | | | Not Yet Satisfactory | | |
| **Assessor Signature** |  | | | **Date** | |  |
| **Is student eligible for reassessment (Re-sit)?** | No | Yes | | **Re-assessment Date:** | | Week Twenty |

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| --- | --- | --- | --- |
| **Feedback to student** | | | |
| *Via Blackboard (LMS) – Please check [Grade] section.* | | | |
| **Feedback from student** | | | |
| *Via Blackboard (LMS) – Please use [Comment] section during submission.* | | | |
| **Student signature** |  | **Date** |  |

|  |  |
| --- | --- |
| **Assessment Instructions** | |
| **TO THE ASSESSOR** |  |
| Type of Assessment | Individual Project |
| Duration of the assessment | 5 class sessions (Weeks 6-10) |
| Location of assessment | Classroom |
| Conditions | Assessor to ensure that the noise levels, natural interactions and time variances are maintained as it would be in the Software Development industry.  Learners are required to complete the required tasks in class and submit the required documentation electronically via Blackboard |
| Elements and Criteria | As detailed in the assessment plan  You are required to make sure that all students meet the elements, performance criteria and oral communication items as outlined in the provided solution |
| **TO THE STUDENT** |  |
| Purpose of Assessment | You are required to show you can:  ICTWEB513 Build dynamic websites   * Demonstrate your skills and knowledge by creating, coding, debugging, and testing a dynamic website, * Establish user requirements and then research and collect information about business requirements and legislative standards, * Manage time and tasks to produce a hierarchy of web pages showing navigation.   ICTWEB514 Create dynamic web pages   * Review technical requirements for client-side dynamic content, * Apply applicable languages and technologies to develop templates for web site creation, * Test and evaluate the dynamic content and present feedback.   BSBXTW401 Lead and facilitate a team   * Review the skills and knowledge required to effectively lead a team * Communication strategies and performance criteria * Facilitate and coach team members   The student must demonstrate the ability to complete the tasks outlined in this assessment and is expected to use systematic analytical processes and effect time management to meet the goals/deadlines outlined in the DAP. |

|  |  |
| --- | --- |
| Allowable Materials | Blackboard Topics, SDLC, Weekly readings (PDF), Example programs and Independent Outside of Class Activities |
| Required Resources | Web links and example code can be downloaded from the Blackboard portal.  PC with Notepad++, Turnkey Web Server, GitHub, MSOffice.  Internet Access to GitHub and www.citems.com.au/ |
| Reasonable Adjustment | In some circumstances, adjustments to assessments may be made for you. If you require support for literacy and numeracy issues; support for hearing, sight or mobility issues; change to assessment times/venues; use of special or adaptive technology; considerations relating to age, gender and cultural beliefs; format of assessment materials; or presence of a scribe you need to inform your lecturer. |
| Assessment Submission | All questions and programming activities must be attempted. All written answers must be submitted in this assessment document in the appropriate space.  Use of research tools and peers in formulating answers are acceptable – but work submitted must be your own work.  Final project documentation is to be uploaded to the appropriate area in the Blackboard course created for this unit.  If you are marked as NYS (Not Yet Satisfactory) on your first attempt, you will be provided with another opportunity to re-attempt the assessment. |
| Portfolio Description | A project of web coding tasks and written questions which should be completed in class and finished in the students’ own time on a weekly basis as per the Delivery and Assessment schedule.  Question 1 – Design Specifications  Question 2 – Web Page Content  Question 3 – Version Control  Question 4 – Design Approval  Question 5 – Website Development  Question 6 – Testing  Question 7 – Demonstration, Feedback and Signoff |

# Scenario

As the Senior Web Programmer with CITE Managed Services, you are required to develop a knowledge base resource for leadership skills by creating a multi-page website. The details and criteria are provided in the following paragraphs.

The multi-page website will utilise the Bootstrap framework for navigation and knowledge information display. The knowledge base data will be hosted on a MySQL server which populates the various web pages. Ensure your development follows an Agile methodology that is recorded and maintained using your GitHub account.

You should consult with the CITE representative (your Lecturer) if you are unsure about any of the problems or questions in this assessment. Your primary research should focus on the resources on the Blackboard LMS and CITE web site, additional information can be collected from the Internet, ensure all sources are referenced in your submission. You must demonstrate your working website before uploading to Blackboard, your Lecturer (Assessor) will sign off to ensure all the criteria are satisfied.

## Minimum Client Requirements

* A single home web page (index.html) as the entry point into the website.
* A single contact web page (contact.html) with links to the CITE and SMTAFE websites.
* The user can navigate between all web pages using a suitably labelled navigation system.
* Navigation can be vertical/horizontal or tabbed using the appropriate Bootstrap framework.
* The navigation must be consistent across all web pages. All web pages must have a consistent theme (colours, fonts, etc)
* The user can select/click a menu option on the content web pages and the appropriate question/answer/definition will be selected from the MySQL database and displayed.
* The content display can be accordion, collapse, table, or similar component; all knowledge base information must be selected from a MySQL database hosted on a suitable server (Turnkey) any variation must be approved by the Lecturer before implementation.
* The website must be compatible with all contemporary web browsers.
* The website must be compatible with all major devices (PC, Mobile).
* The development must fully utilise all aspects of the Bootstrap framework version 5; visit the Bootstrap URL to review and select the appropriate components, https://getbootstrap.com.

## Suggested Interface Design

|  |  |  |
| --- | --- | --- |
|  | Graphical user interface, text, application, Word  Description automatically generated | Graphical user interface, table  Description automatically generated |
| Content (accordion layout) | Content (collapse layout) | Content (HTML Table) |

## Question 1 Design Specification

Provide a suitable description/explanation for each client requirement, and then insert your GUI design with labels that highlight all the major features. Complete the following Design Specification template to answer this question.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Design Specification | | | | |
| Developer Name | Kyle Watson | | Date | 23/08/2022 |
| Technical Requirements | | | | |
| Requirement | | Description | | |
| What Bootstrap components will be used to display the information? | | * An accordion layout for content * A navbar for moving between pages | | |
| Describe the language you will use to connect to the Database? | | * The language that will be used to connect to the database is Structured Query Language (SQL) which allows the access and manipulation of data within a database. | | |
| How will the website be responsive? | | * An interactive navigation system * A responsive content display that retrieves data from a Turnkey server and populates an HTML table | | |
| How will the website be WCAG compliant? | | * The website will be WCAG compliant by following the accessibility suggestions given by the Bootstrap 5 documentation * Before its final release, the website’s accessibility will be assessed using the official WCAG 2.1 guidelines | | |
| Prototype Specification (GUI Design Diagram and Navigation Diagram) | | | | |
|  | | | | |
|  | | | | |

## Question 2 Web Page Content

Your next task is to develop the content for each of the web pages on your website. You have been supplied with the questions, descriptions and answers; however, the information has been scrambled, you must review/research and correct this data before uploading into a suitable MySQL database table. Each question/description/answer must be displayed on a separate web page using a similar page layout as shown in your design.

|  |  |  |
| --- | --- | --- |
| **Question** | **Description** | **Answer** |
| Question 1. Organisational Requirements | When working with teams from other Divisions, describe the organizational policies that you will refer to, to ensure that your project aligns with the organization’s requirements and the importance of each:   1. Workplace policies 2. Code of conduct 3. Reputation and culture 4. Legislative requirements (EEO, WHS) | * Code of Conduct: details acceptable organisational and ethical and professional behaviours that employees must follow. This is important to ensure that team task * CITE Corporate Social Responsibility: details the organisations social responsibilities and what they consider is important for the community, the people within that community, sustainability and their accountability. This determines the culture of the workplace environment * The Equity and Diversity Policy: ensures that the employees of the organization are aware of their rights and responsibilities in creating and maintaining a work environment which encourages and respects equal employment opportunity and diversity and is free from discrimination, harassment, victimization and bullying. This is fulfill the EEO Act 2000, Disability Opportunity Act 1984 and Age Discrimination Act 2004. * The OSH Policy – addresses the OSH of the employees by assisting them to understand their responsibilities and duties with regard to safety and health as well as identifying the responsibilities and duties of the organization as an employer. |
| Question 2. Team facilitation techniques | Cohesive teams are better able to accomplish tasks, solve problems and create innovation. As a team leader describe several strategies that you will use to develop team cohesion and effectiveness in your project team. | **Communicate with your staff**  Be clear with your staff about the purpose of their work, expectations and common goals. You can easily achieve this by having regular office meetings and coming up with a mission statement for your office that encourages a team mentality. By not communicating with employees, you increase the risk of misunderstanding, assumptions, apathy and lack of loyalty.  **Commit to staff development**  Savvy business leaders are always putting resources towards the continued education of their staff members, and helping to develop their skills that will enhance their value to the team. Sending your staff (and yourself) to seminars on communication, emotional intelligence, team building and leadership training are worthwhile as well. Remember to follow up on these courses by giving staff your ongoing support by ensuring employees use their new skills, encouraging them to be proactive, and implementing effective new policies.  **Offer feedback**  Your staff members should always know where they stand with respect to your company, and by providing them with both casual and formal evaluation you will effectively be showing them that they’re valued, respected and that their work is acknowledged. Many business owners make the mistake of only providing feedback when it’s negative, but providing plenty of positive feedback will build the confidence of your staff members and will make it more effective when you do need to criticise.  **Encourage collaboration**  Every office needs some collaboration among staff members in order to make the work happen, but there are plenty of benefits to making that collaboration more effective. By creating a space where employees can get to know each other — even if they don’t work closely that often — then you will create a space that is more comfortable and that encourages more creative thinking and brainstorming. Having staff members that know each other and that work well together means that better work will get done more quickly, and more innovation will come of it.  **Be consistent**  No matter how many staff members you have, it’s important that you try to be consistent in your decision-making. Having strong office policies means you don’t “play favourites” and you treat each employee the same, which will make them all feel more valued. Communicate decisions clearly and openly so that everyone knows them at the same time, and handle similar situations involving staff members the same way every time so that each employee knows they are as important.  Strong teams don’t just appear magically, as you have to work hard to improve communication and respect amongst your staff members. If you really work at it, don’t be surprised if you start noticing positive changes quickly. |
| Question 3. Mentoring and coaching techniques | Coaching and mentoring are development approaches based on the use of one to one conversation to enhance and individuals’ skills, knowledge or work performance. Describe 2 techniques in coaching and mentoring that you will use with your team to support the members. | **Listening**  Coaching is not about the coach, but rather about those that they are coaching. Listen to their thoughts, needs and concerns. Listen in order to:   * note key points which you can summarise for your coachee to help maintain clarity * pick up on any unfocused statements and then encourage more clarity * note the way your coachee responds to determine any underlying issues through further questioning.   **Asking open-ended question that focus on three levels**   * First level: describing the issue * Second level: strategic questions – digging deeper * Third level: strategic questions – helping it change   **Making observations**  Reflect things you observe about a person back to them in a neutral, non-judgement way. These are only useful when validated by expressing them to the person involved and getter their agreement that the observation is correct and valid. A well-stated observation may then lead into a coaching or performance conversation. |
| Question 4. Conflict resolution | When conflict is resolved effectively, it leads to many benefits, such as accomplishing goals and strengthening relationships. Broadly outline a strategy on how you would resolve a conflict within your team. | * Identify common goals * Search for agreement * Consider the range of solutions and possibilities * Question our beliefs * Commit to resolving issues and problems as a group |
| Question 5. Communication methods and styles | Project success depends on effective communication. Steady communication from leadership can improve morale and engagement. Describe the different methods and styles of communication that you will use with your team. | Methods:   * Verbal communication * Non-verbal communication (body language) * Written communication * Listening * Visual communication   Style used with the team:  Assertive (achieves goals without hurting others, emotionally expressive, protects own rights and rights of others, speaks with a balanced tone and volume) |
| Question 6. Cross cultural communication | We work and live in a diverse community that has different cultures and individuals with special needs or disabilities. Describe the principles of communication for these groups and how you would apply these principles with your team. | * Maintain etiquette – many cultures have specific etiquette around the way they communicate. Research the target culture. * Avoid slang – Nonactive English speakers have a comprehensive understanding of English but not slang idiom and sayings. They may understand the individual words you have said but not the context or meaning. * Speak slowly – Modulating your pace will hep as will speaking clearly and pronouncing your words properly. * Keep it simple – avoid using unnecessary large words. * The same techniques would be used when communicating with individuals that have special needs or disabilities but would ask the person what will help with communication as there are different ways to communicate and be polite and patient. |
| Question 7. Professionalism | A good team leader leads by example. Describe the professional behaviours that you would role model as a leader for your team. | * Being grounded in ethics and integrity – doing the right things for the right reasons * Building trust – doesn’t come automatically but is earned. Take actions that gain respect. * Bringing others along – help others grow and achieve. Work with people to help them uncover what they do best and ways to strengthen their assets * Inspiring those around you – have a vision that motivates people to follow and expressing it with passion and energy, backing it was strong beliefs and values that count * Making decisions – especially the hard decisions with authority and confidence. * Rewarding achievement – recognize hard work and deliver what you promise when that happens. |
| Question 8. Workplace Contingencies | Personal events can often place strain on teams and contingencies need to be put in place for:   1. Unplanned leave or absence of workers 2. Re-allocation of work tasks 3. Succession planning for important team roles   Describe the contingencies that you have planned for each of the above to ensure that the project objectives can be met. | 1. Prioritise the tasks. Needs to drive everything. Start at the top of the list and begin allocating work from there. That list should be based on the team’s and the organization’s goals. This has to be the first consideration in terms of how you distribute work. If a project is a top priority and somebody is available to do that work, they should be tasked with that work. 2. Skill Sets - Evaluate the skill set of the people who you’re thinking about distributing the work to. If they have the right skill set, you’re going to get a high quality result. The end product will be something that meets your customer’s needs. This also reduces the likelihood of people failing because you’re not giving them work that they don’t have the skill set to perform. You’re giving them something they can be successful with. 3. Undertaking Performance Management with individuals will provide insight to their goals. Be transparent and communicate that they have been singled out as a protégé, but don’t make any guarantees as the situation can change due to circumstances. Invest in the professional development of those that you select as a successor. |
| Question 9. Teamwork challenges | 1. Working with teams can be challenging. What does establish a team performance plan mean and what are the benefits? 2. How would you handle a potential risk or safety hazard to ensure that it did not affect the team’s performance? Provide an example of the risk (eg, second wave of COVID) and the strategy that you would implement. 3. The project’s final deadline is nearing, and it is possible that the project will not be complete unless an unethical alternative suggested by one of the team members is implemented. What is your approach to tackle this situation? | 1. Establish team performance    1. Identify the desired performance levels of the team    2. Identify how these performance levels will be achieved    3. Provide guidance and direction to the team    4. Measure progress towards the desired performance levels 2. As an example of COVID where face to face meetings where no longer possible and group work still had to continue. I would change the meetings to a suitable medium (continue with virtual meetings) but have more check-ins with individual team members to ensure that they don’t feel isolated. 3. Reiterate the code of conduct and organization policy to the entire team. Be firm about not following that path and counsel the individual member. |

## Question 3 Version Control

CITE would like you to use GitHub as the primary source control, setup an appropriate structure in your GitHub account to manage the Assessment Two website development. Add a project to your repository which reflects the basic Agile development process you intend to pursue. Complete the following GitHub Version Control template to answer this question.

|  |  |  |  |
| --- | --- | --- | --- |
| GitHub Version Control | | | |
| Repository Name: | Knowledge Base Resource for Leadership Skills | | |
| URL | https://github.com/Kwatson-1/Knowledge-Base-Resource-for-Leadership-Skills | Date | 24/08/2022 |
| Screen Shot(s) |  | | |

## Question 4 Design Approval

Once you have complete questions 1,2 & 3 arrange for your document to be reviewed by the Lecturer/Assessor for approval, sign off and feedback before completing the development and testing.

* Question 1 Design Specification
* Question 2 Web Page Content
* Question 3 Version Control

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Design Approval (Lecturer/Assessor use only) | | | | |
| Approver Name | Title | Signature | Date | Approved? |
| Stewart Godwin | Lecturer |  | 30/08/2022 |  |
|  |  |  |  |  |
| Lecturer Feedback | | | | |
|  | | | | |

## Question 5 Website Development

Develop the software components to create a website based on your prototype and design specifications. Use the content from Question 2 and create a MySQL database which will be used to populate the various web pages. The database should consist of one table with four fields.

Add suitable enhancements for the fonts and background colours to satisfy contemporary web page standards. Upload all the code to the Turnkey Server, and then update your GitHub with the completed website code and associated files. Your code must adhere to the CITEMS software development standards. (refer http://www.citems.com.au/)

## Question 6 Testing

Ensure your code is error free and functions correctly, then test the website on several different browsers. During these tests check the web pages scale correctly and conforms to responsive web design. Secondly, test the website on several different digital devices and record any errors. Your Test Report must include appropriate evidence that your code functions as expected (references to screen captures). Complete the following Test Report template below to answer this question.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Report | | | | |
| Developer Name | Kyle Watson | **Date** | 19/09/22 | |
| Browser compatibility test | | | | |
| Browser name | Description | | | Pass / Fail |
| Chrome |  | | | Pass |
| Firefox |  | | | Pass |
| Microsoft Edge |  | | |  |
| Internet Explorer |  | | | Fail – Navbar dropdown menu for accessing the question pages does not work. |
| Device compatibility test | | | | |
| Device Name | Description | | | Pass / Fail |
| iPhone SE |  | | | Pass |
| Pixel 5 |  | | | Pass |
| iPad Air |  | | |  |
| Samsung Galaxy S8+ |  | | | Pass |
| Nest Hub |  | | | Pass |

## Question 7 Demonstration, Feedback and Signoff

Ensure your code is fully commented with your Name, ID, and Date placed above the main code body of each file. Check all the above documentation has been completed and is ready for inspection. Contact your Lecturer (Assessor) and arrange to demonstrate your working website, use the following Marking Guide and Observation Checklist to ensure you have completed all the assessment criteria.

### Assessor Marking Guide

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Marking Guide and Observation Checklist | | Satisfactory | | Feedback |
| **Questions** | | YES NO | |  |
| Q1 | Design Specifications: All fields of the Design Specification are filled in. |  |  |  |
|  | Client Requirements contain information that is correct. |  |  |  |
|  | Prototype Specifications show a detailed diagram of the GUI with explanation notes. |  |  |  |
| Q2 | Web Page Content: All the questions, description and answers have been grouped and aligned correctly. |  |  |  |
|  | Content is formatted for easy access. Code uses Bootstrap 5 framework. |  |  |  |
| Q3 | Version Control: All fields of the template are filled in. There are screen shots of GitHub showing the Project and Repository. |  |  |  |
|  | Observation of GitHub reflects an Agile project methodology. |  |  |  |
|  | Observation of GitHub reflects a repository with website files. |  |  |  |
| Q4 | Website Development: All the website files have suitable comments which reflect CITE standards. |  |  |  |
|  | All the content is saved into a table with 4 fields on a MySQL server |  |  |  |
|  | Observation of GitHub shows a final version of the website files. |  |  |  |
|  | Website has satisfied all the client requirements. Data uses PHP and SQL to display content |  |  |  |
| Q5 | Testing: All the fields in the Testing Report have been filled in. |  |  |  |
|  | Website have been tested on three different browsers. |  |  |  |
|  | Website have been tested on three different digital devices. |  |  |  |
| Q6 | Demonstration: The website functions as required, and all web components work correctly. |  |  |  |
| **General Feedback:** | | | | |
|  | **Assessment Decision**  Satisfactory  Not Yet Satisfactory | | | |

**Note:** All documentation must use the supplied templates/forms.

**Submit the zipped solution folder with relevant documents to Blackboard**

End of Assessment Task Two