Assessment 3, Group Project
ISCG6420 IWD
Semester 1, 2024

1

Create an Interactive Website.
Total Marks 100
Course Weighting 50%
Checkpoint 1: 08 May 2024
Checkpoint 2: 22 May 2024

Due: 5:00 pm, 5 June, 2024

School of Computing and Information Technology

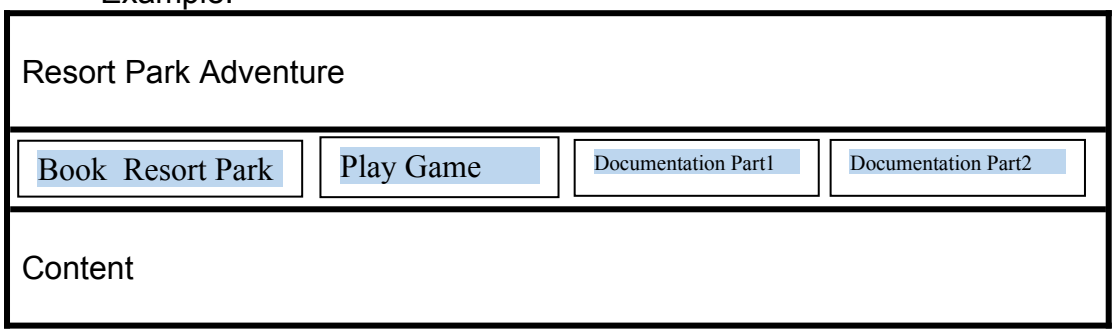
Learning outcomes:

1. Explain and apply the fundamentals of CSS (Cascading Style Sheets).
2. Explain and apply the fundamentals of JavaScript.
3. Use current client-side website development languages/technologies create a complex commercial or educational website.
4. Use the features of Web/Multimedia authoring packages to create a complex commercial or educational website with effective navigational

Project instructions:

- You will work in pairs to create a website hosted on Github Pages.
- Project consist of two parts:
  Part 1 – Create an online booking system for Piha Holiday Lodges.
  Part 2 – Create interactive game for children.
- You will present your part 1 and 2 of the project to the class. Presentation is compulsory. Each pair will have 10 minutes to present their work.
- Your project homepage should include links to both parts. The example of project homepage layout is given below:

  Example:



Use of web libraries and frameworks in this assessment are allowed on an approval basis. Requests for approval of such tools must be made before the Checkpoint 2 submission deadline. You will be asked questions about your use of any such implemented tools during your presentation.

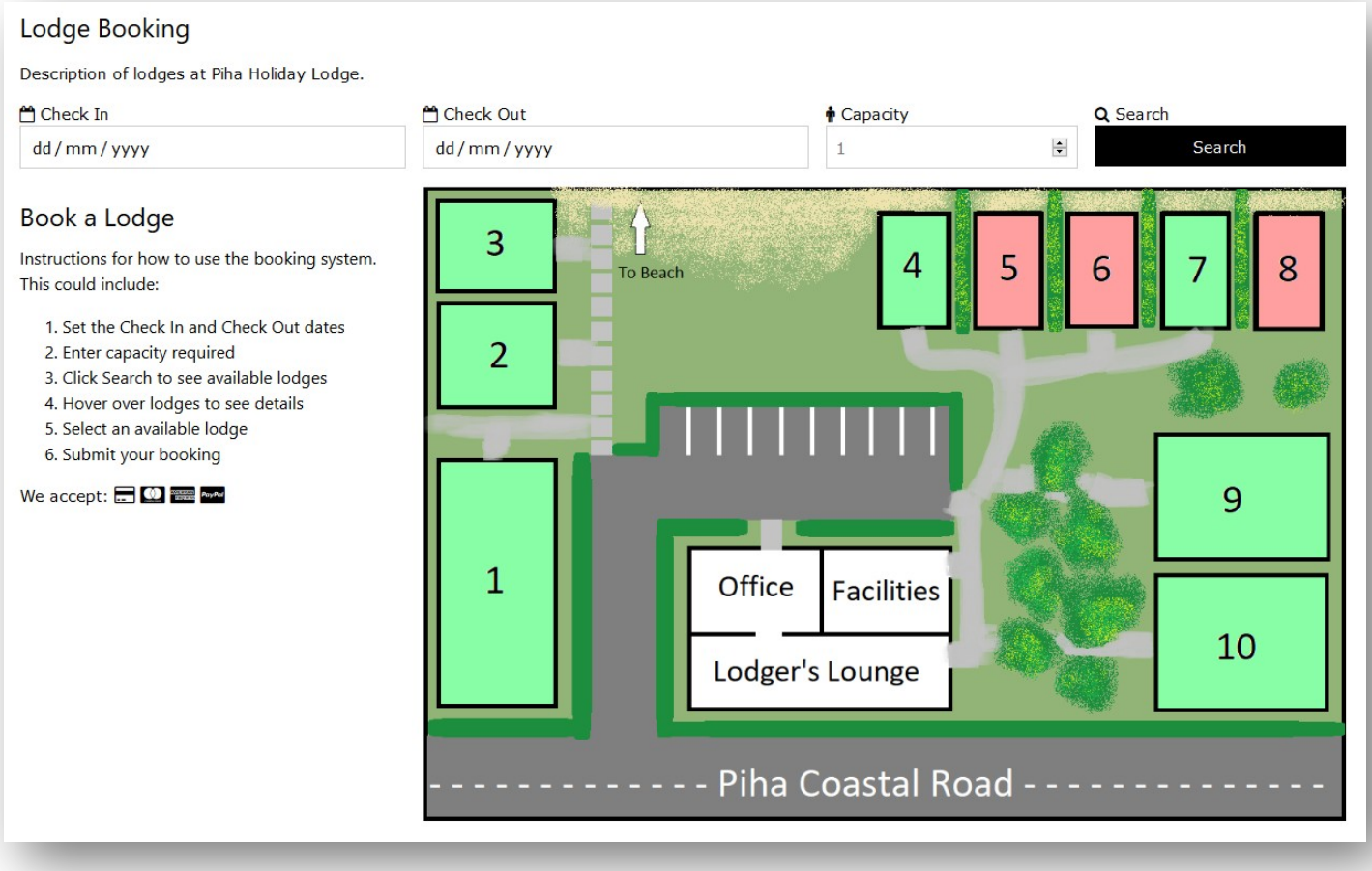
Part 1 – Create online booking- reservation system for Piha Holiday Lodges [45%]

Develop a client-side application for booking, using XML as external storage.

a) Provide documentation for your application (link to PDF file(s)).
b) Display a map of the Piha Holiday Lodges property, and dynamically provide an interactive system for viewing the status of lodges and the ability to book an available lodge for a holiday.
    a. Users should be able to 'mouse over' a lodge and see a popup containing information about the lodge.
    b. Load data for the lodges from an XML file (including cost, booked status, capacity, and an image path). Use this information to provide 'mouse over' information **AND** populate the map's lodge objects.
    c. Users should be able to specify a number of people staying and select number of days to stay.
    d. Your lodges layout outline is up to you. An example is presented on the next page (page 3), Please note it is example only and it is not demonstrating all requirements.
c) Situational requirements
    a. Three lodges have already been booked, so users cannot book them.
    b. Different houses can accommodate a different number of people and their cost is different, (Please have as minimum 4 different prices). Price is the cost per day of accommodation. Each lodge can accommodate up to 'Unit Maximum number of people to stay' (for example UMN=2, only two people can stay)
    c. You need to have as minimum 5 houses with UMN=2, as minimum 2 houses with UMN=4, as minimum 2 houses with UMN=6, as minimum 1 house with UMN=8.
d) Users cannot book a lodge with a capacity smaller than the requirements (If booking for 3 people, a lodge with a capacity of 2 cannot be booked)
e) Upon lodge selection the booking system should calculate total price and update statement information.
f) Your program should calculate price for the selected period of time for the specified lodge, if user reduces the number of days to stay – program will re-calculate the price.
g) All information should be displayed: The user should have clear information about which lodge they have booked, their cost for the period of booking, number of people booked, dates and time of booking and total cost.
h) User can view a picture of their lodge.
i) Your program should indicate that already-booked places are not available.
j) On final submission a Summary for booking will be displayed. Include: arrival date and time, leave date and time. Selected lodge number, cost per day and total cost, number of people booked.
k) Bonus 5 marks will be awarded if Check-in and Check-out date fields restrict input to valid dates (cannot book using dates in the past), Check-in

field defaults to today's date, and Check-out field defaults to tomorrow's date.

This is an example only (you need to do your own design and layout).



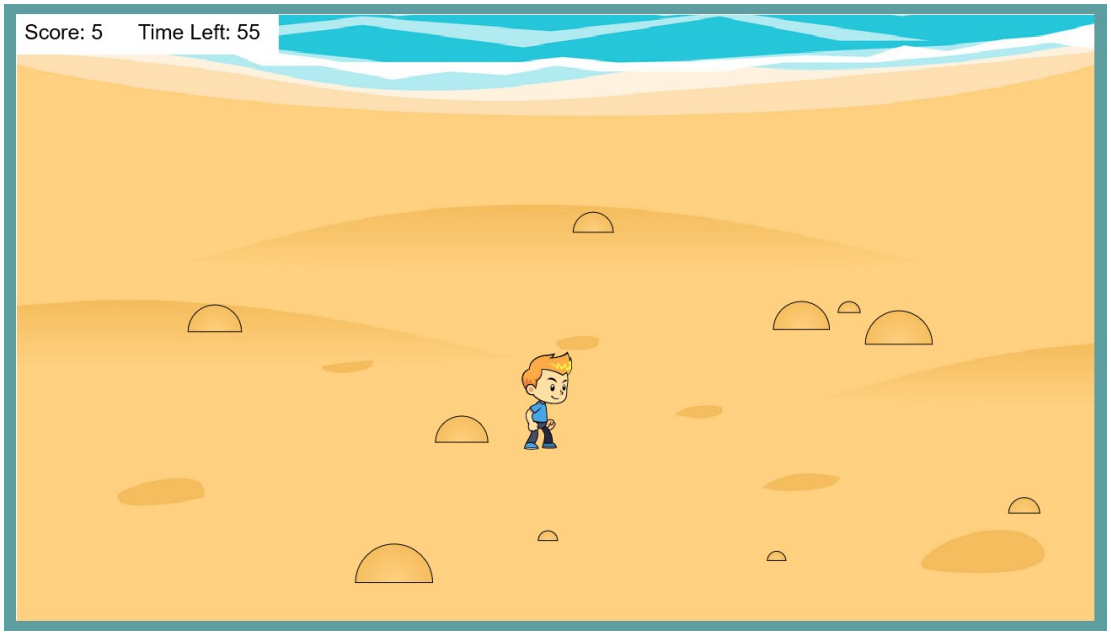
Part 2 – Create interactive game [45%]

You will design and develop an interactive web game for young children using HTML5 elements including Canvas.

Game story:

The game is set at a sandy beach. Just under the sand surface are a number of beach worms moving around, which can be seen as mounds of sand moving across the beach surface.
The main character is a person or animal at the beach trying to catch the worms. The main character's design and look is up to you. It can be any person or animal (including a self-designed character).
Every worm caught will get increase the player's score by one. The goal of the game is to catch as many worms as possible within a time limit.

This is an example only (you need to do your own design and layout):



Game development requirements:

Character:

- Character movement is controlled by using the keyboard arrow keys (up, down, left, right) or W, A, S, D keys.
- You should have an additional key (for example “space”) to trigger the catch action. This should be described to the user.
- Each time the character changes direction the character image should be flipped to match the movement direction (look in the direction of movement).
- Character movement is restricted to inside the canvas.
- Every time the character successfully catches a worm, a score of one is added to the current score and a ‘happy’ sound is played. However, if the character is not successful in catching, an ‘unhappy’ sound will be played.
- Define and implement some character animation (e.g: sprite sheet - eyes movement, legs movement, tail movement, ears movement, etc)

Each worm has a life cycle which is described below:

- Stage 1: a small sand-coloured semi-circle with small radius will appear randomly on the canvas (imitate rising to the surface). Radius should be filled with similar colours to the beach background. The worm mound should move in a random direction at a random speed.
- Stage 2: The mound will continue to move around the canvas, and grow in size indicating the worm is coming closer to the surface (increase radius of semi-circle) for 5 seconds.
- Stage 3: The mound will continue to move around the canvas, and shrink in size indicating the worm is going down, away from the surface (decrease radius of semi-circle and gradient) for 5 seconds.
- Stage 4: The mound disappears (do not draw during this stage) and is relocated to a random location on the canvas and the life cycle restarts.

- Worms movement is restricted to inside the canvas.

- Bonus 5 marks will be awarded If worms are filled with a radial gradient that uses colours similar to the beach surface, which grows / shrinks with the mound in lifecycle stage 2 / 3.

Additional requirements for the game:

a) Minimum 4 different sounds in the game (eg: catch success, catch fail, start and end game sounds).
b) Provide feedback with appropriate text messages and sound to the player. For example, a mechanism to display the score to the player or text message in the end of game.
c) Time settings which can be changed by player. Default time setting for duration of game is 3 minutes. Other possible value for the duration of the game is 1 minute.
d) Start button and restart button.
e) Appropriate environmental scenery (background image).

f) Provide documentation for your application. Make the document link available on landing page.

Part 3 – Presentation - 10%

You will give an oral presentation on your work completed for part 1 and 2.

- Your lecturer will decide the time and date of the presentation.
- Your presentation needs to be maximum 10 minutes long.
- Presentation should be evenly distributed among the team members.
- Presentation must include a live demo of part 1 and part 2.
- You may use multimedia (slides, videos, animations, etc) to help showcase your achievements.
- You need to submit a copy of the material you'll use in the presentation along with your part 1 and 2 submission.
- Your presentation may be recorded for marking and moderation purposes.
- Familiarise yourself with the observation checklist to ensure you meet the requirements.
- Your lecturer will complete the observation checklist for each presentation.

Presentation observation checklist

Name of Learner:

Name of Observer:

Date of Presentation:

Indicate if the learner has met the criteria during the process of achieving the objective. Use the space to add comment for feedback to the Learner and for moderation purposes.

Observation	Comment	Max mark	Your mark
Appropriate body language (including movements and gestures)		1	
Appropriate usage of voice, pronunciation and volume		2	
Language used is suited to the audience (fits purpose, audience, and context?)		1	
The subject matter was organised logically		2	
Demonstration of the application		4	
TOTAL		**10**	
Extra Notes:			

Observer's Signature:

Possible sources of information

You can use resources such as academic journals, web sites and other Internet sources, class discussions and handouts, journals, newspapers and magazines, books. You need to provide the reference of all the when referencing web sites, you should, where possible, give the author, title and date of the resources, and the full URL of the page(s) referred to, rather than just the address of the home page.

Delivery

Checkpoint 1

1. Part 1 -Wireframe for your Project 2 landing page, Wireframe(s) for booking system with steps to outline how user will proceed with booking.
2. Part 1 Requirements -according to point 2 Marking criteria.
3. Part 2 Wireframe for game page and Game storyboard.
4. Homepage for your project 2 (index.html)

Checkpoint 2

1. Part 1 - Either A or B
    a. HTML and CSS implemented, no JS progress.
    b. Some progress towards HTML, CSS and JS implementation.
2. Part 2 – Either A or B
    a. HTML and CSS implemented, Basic JS game loop implemented.
    b. No HTML or CSS implementation, Game loop and character movement implemented.

Full submission:

1. Your full submission should include your finished website**,** storyboard(s) and wireframe(s). Documents should be attached to your homepage as links.
2. A softcopy of your web site must be uploaded on Moodle using Project one submission link before the deadline. Please use a **zip file**, it should have a name project2_YourName_YourID_OtherStudentName_ID
3. Your website must also be available online via Github Pages. A link to your live website must be included in your Moodle submission.
4. One page as a standard cover sheet softcopy should be presented in your zip folder as well (please download cover page from Moodle). **This page must include a signed declaration that "this submission is our own work, except where clearly referenced".**
5. **For the purposes of academic integrity, students who haven't demonstrated progress work in the class time (and/or no check point submission) can be asked to demo/test their working code and explain logic to the lecturer individually after assignment submission.**

A copy of your submission will be kept by the department for future reference and audit purposes.

Marking Guide

Marks for your work will be given according to the following marking schedule:

No	Item	Criteria	Marks
	Part 1 (45 marks)		
1.	Provide documentation for your application. (5 marks) • XML data design (two files) • User booking design page(s) wireframe(s) for booking system with steps to outline how user will proceed with booking. • Link on the landing page	5 marks = both the design are in Pdf format and link(s) to the landing page is working. Clear explanation of presented data for XML data dictionary and wireframe provided for User booking design page, which has all details required for booking. 2-4 marks = one or two details in documents are missing or link(s) not working or quality of documentation is not up to standard. 1 mark = one of the documents is submitted with number of errors, second document is not submitted.	
2.	Resort Park layout must be link to data (image, cost, 'number of people allow', other information as required from XML file) This data is presented dynamically on booking page. Load resort data settings from XML files (10 marks) • XML files are defined and linked in the code. • JavaScript reading from XML files. • Appropriate use of data structures (objects, arrays, etc)	10 marks = all the criteria are met. 6-9 marks = one or two minor details are missing 1-5 marks = number of details are missing 0 = hard coded values for booking information	
3.	Page is providing a "mouse over" information for each house. User can view a picture for his/her accommodation, how many people allowed and cost. (5 marks)	5 marks = all criteria are met. 2-4 marks = up to three minor functionally not working based on the requirements. 1-2 marks = more than three of functionally not working based on the requirements	
4.	Different houses can accommodate a different number of people and their cost is different, (Please have as minimum 4 different prices). Price is a cost for one day accommodation. Each unit/house can accommodate up to 'Unit Maximum number of people to stay' (for example UMN=2, only two people can stay) You need to have as minimum 5 houses with UMN=2, as minimum 2 houses with UMN=4, as minimum 2 houses with UMN=6, as minimum 1 house with UMN=8. (5 marks)	Total 5 marks = criteria are met. 3 -4marks = most of criteria are met. 2- marks = up to three minor functionally not working based on the requirements. 1 marks = more than three of functionally not working based on the requirements	

5.	User can't book a smaller place. (If his family is 3 people he can't book place for 2) (4 marks)	4 marks =All criteria are met. 2-3 marks =All criteria are met with minor error or errors in implementation.	
6.	On user selection the booking system should calculate total price and update statement information. Your program should calculate price for selected period of time for specified place, if user reduce a number of days to stay – program will re-calculate price. All statement information displayed: User should have clear information which places (House/units, house number) he is booked, their cost for period of booking, number of people to come; dates and time of booking and total cost. (5 marks)	5 marks =All criteria are met. 2-4 marks =All criteria are met with minor error or errors in implementation.	
7.	Your program should indicate that recently booked places are not available any more. (3 marks)	3 marks =All criteria are met. 2 marks =All criteria are met with minor error or errors in implementation.	
8.	On final submission a Summary for booking will be displayed, include: arrival date and time, leave date and time. Selected unit (or house) number, cost per day and total cost, number of people coming. (5 marks)	5 marks =All criteria are met. 2-4 marks =All criteria are met with minor error or errors in implementation.	
9.	User can come back to book additional place (unit/house) if he/she needed. (3 marks)	3 marks =All criteria are met. 2 marks =All criteria are met with minor error or errors in implementation.	
10.	**BONUS** Check-in date field default value set to today's date. Check-out date field default value set to tomorrow's date. Check-in and Check-out fields restrict input choices to dates beyond their starting values	5 marks = All criteria are met. 1-4 marks = Some criteria are met. 0 marks = no criteria met.	

	Part 2 (40 marks)		
1.	Character movement and controls: (15 marks) • Character movement is controlled by using the keyboard arrow keys (up, down, left, right) or WASD keys. • You should have additional key (for example "space") to attempt to catch a worm. • Each time Character changes direction the face should be in front of Character. • Character movement is restricted to inside the canvas. • Every time Character successfully catches a worm, a score of one is added to the current score and a 'happy' sound is played. • Every time Character fails to catch a worm, an 'unhappy' sound is played. • Character has some movement animation (movement of a limb, facial expression, etc. Can be done with a sprite-sheet).	15 marks =All criteria are met. 11 -14 marks =All criteria are met with minor error or errors in implementation. For example: Character can run out of one side of canvas. 6 - 10 marks =Most criteria are met with a few errors in implementation. 2 - 5 marks =Some criteria are met with a number of errors in implementation. 1 mark = A number of problems in program only a few things work with minor error.	
2.	Worms appear randomly and have required life cycle (15 marks) Each worm has a life cycle which is described below: **Stage 1**: a small sand-coloured semi-circle with small radius will appear randomly on the canvas (coming to the surface). Radius should be filled with a radial-gradient of similar colours to the beach background. The worm mound should move in a random direction at a random speed. **Stage 2**: The mound will continue to move around the canvas, and grow in size indicating the worm is coming closer to the surface (increase radius of semi-circle) for 5 seconds. **Stage 3**: The mound will continue to move around the canvas, and shrink in size indicating the worm is going down, away from the surface (decrease radius of semi-circle) for 5 seconds. **Stage 4**: The mound disappears (do not draw during this stage) and is relocated to a random location on the canvas and the life cycle restarts.	15 marks = Worm's life cycle met all criteria described. 11-14 marks = Worm's life cycle met all criteria described with some minor error or errors in one or two stages. 6-10 marks =Most criteria are met with one of stages missing and some minor error in other stage implementation. 2-5 marks =Only some criteria are met with a number of errors in implementation. 1 mark = A number of problems in stages.	
3.	Additional criteria for the game: **(**10 mark) a) Minimum 4 different sounds in the game and users should be able to control the volume of the sounds. b) Provide feedback with appropriate text messages and sound to the player. For	10= all additional game's criteria are met. 6-9=if one or two additional criteria are missing and/or functionality work partly 2-5 = if more than 2 additional criteria are missing 1 = only one additional criteria implemented with	

	example, a mechanism to display the score to the player or text message in the end of game. c) Time settings which can be changed by player. Default time setting for duration of game is 3 minutes. Other possible value for the duration of the game is 1, 4 and 5 minutes. d) Start button and restart button. e) Overall design and complexity of scenery – background. f) Provide documentation for your application. Make the document link available on landing page.	some minor error.	
4.	Additional criteria for the game: Provide documentation for your application. (5 mark) • Your own game storyboards. • Wireframe for game page.	5 marks = both the design is in Pdf format and link(s) to the landing page is working. 2-3 marks = one or two details in documents are missing or link(s) not working or quality of documentation is not up to standard. 1 mark = one of the documents is submitted with number of errors, second document is not submitted.	
5.	**BONUS**: Worm gradient fill with size change in lifecycle stage 2 & 3	5 marks = All criteria are met. 1-4 marks = Some criteria are met, or some errors occur in implementation. 0 marks = no criteria met.	

	Part 3 (10 marks)		
	Presentation (-10 mark – if no presentation) 1 mark - Appropriate body language (including movements and gestures) 2 marks - Appropriate usage of voice, pronunciation and volume 1 mark - Language used is suited to the audience (fits purpose, audience, and context?) 2 marks The subject matter was organised logically 4 marks - Demonstration of the application	10 marks = Professional presentation with well organised material and strong demonstration of tasks. 1 – 9 marks = Presentation has some issues with professionalism, materials, and/or demonstration of tasks. 0 marks = Poor presentation or no presentation.	
	Checkpoint 1: Complete		
	Checkpoint 2: Complete		
	Total marks		

Rules for Late Submission of Assignments

a. The due dates of assessment work will be notified in course information.

b. Assignments submitted after the due date and time without having received an extension through Affected Performance Consideration (APC) will be penalised according to the following:

- 10% of marks deducted if submitted within 24hrs of the deadline
- 20% of marks deducted if submitted after 24hrs and up to 48hrs of the deadline
- 30% of marks deducted if submitted after 48hrs and up to 72hrs of the deadline
- No grade will be awarded for an assignment that is submitted later than 72hrs after the deadline.

c. Students submitting assignments after the due date and time will be ineligible to resubmit a failed assignment.

Affected Performance Consideration:

A student, who due to circumstances beyond his or her control, misses a test, final exam or an assignment deadline or considers his or her performance in a test, final exam or an assignment to have been adversely affected, should complete the Affected Performance Consideration (APC) form available from the Student Central.

When requesting APC for an assignment, the APC must be submitted (along with work completed to date) within the time frame of the extension requested; i.e. if the Doctor's certificate is for one (1) day, then the APC all work completed all work up to this day must be submitted on an application day.

Academic Misconduct
Cheating and Plagiarism are considered Academic Dishonesty and will be dealt with under the provisions of the Student Disciplinary Statute.

Do you want to do the best that you can do on this assignment and improve your grades?
You could:

- Talk it over with your lecturer
- Visit Te Tari Awhina or Maia for learning advice and support
- Visit the Centre for Pacific Development and Support
- Contact the USU Advocate for independent advice
- For contact details and more information, go to www.usu.co.nz