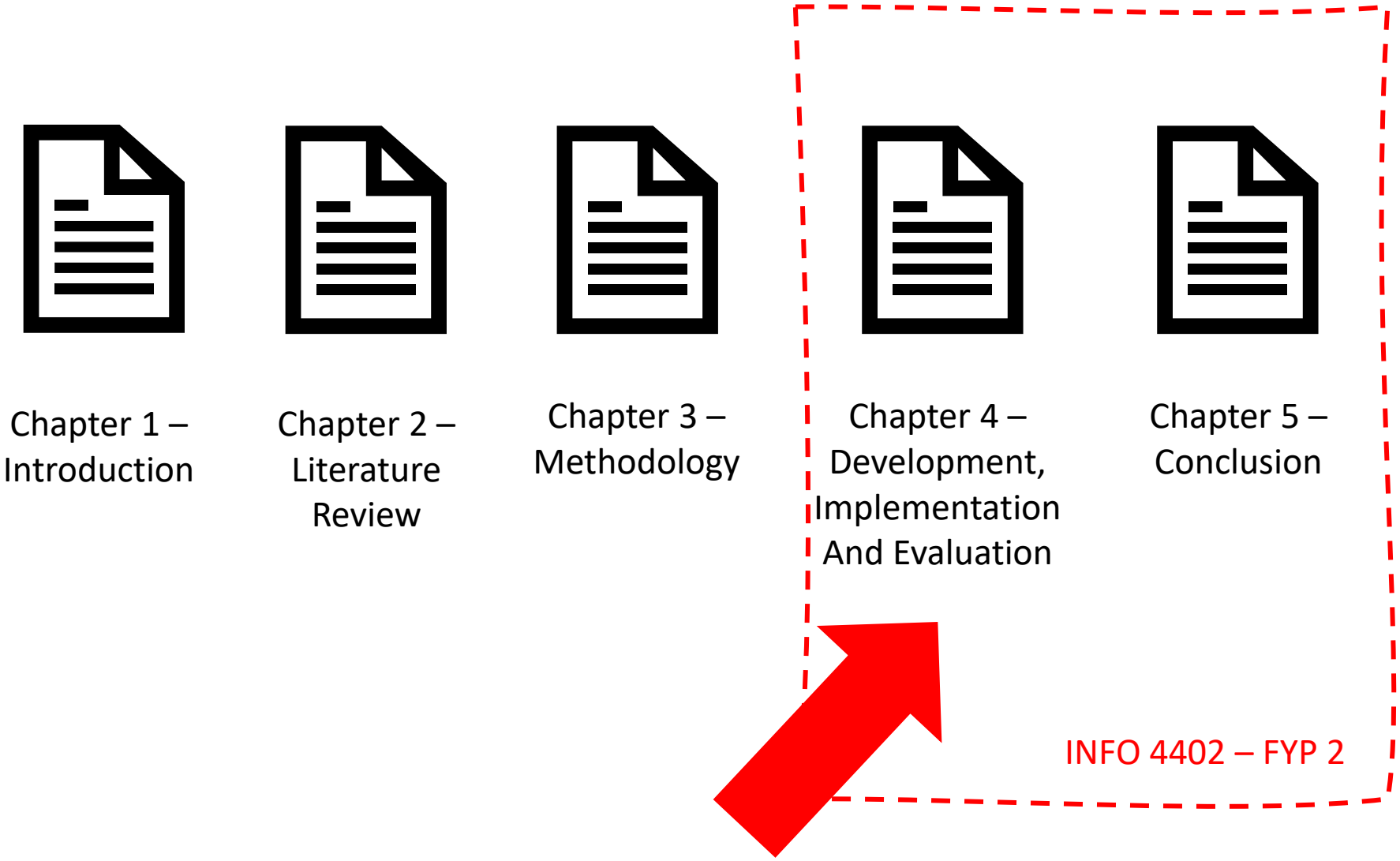
Seminar 3:
INFO 4402 (FYP 2)
Chapter 4 and Chapter 5

INFO 4402 FYP 2

Content of FYP Report



PROJECT DEVELOPMENT, IMPLEMENTATION AND EVALUATION
(Production and Post-Production of System Development)

4.0 INTRODUCTION
Briefly describe the chapter and the completed project (final product).

4.1 SYSTEM INTEGRATION
This part must include the main page or main website for the system, and it must be a screenshot of the main system. For a group project, you need to combine and complete the whole system.

4.2 SYSTEM OUTPUT
Preface statements or subject of introductory to this subtopic.

4.2.1 Administrator
Screen shots for all administrator functions or modules.

4.2.2 User(s)
Screen shots for all users' functions and modules.

4.3 SYSTEM TESTING
Preface statements or subject of introductory to this subtopic.

PROJECT DEVELOPMENT, IMPLEMENTATION AND EVALUATION

(Production and Post-Production of Digital Storytelling)

5.0 INTRODUCTION
Briefly describe about the chapter and the final product of the project. This stage focuses onthe production of the project's content. The content can vary considerably, depending on the available resources (e.g. the combination of various media such as animation and video).

5.1 FINAL COMPOSITION (Production)
Explain the development of media and interactive components.

5.1.1 Digitizing Art
Existing icons, buttons, photographs, illustrations, and graphics are digitized for use in an electronic medium. Electronically generated art as well as digitized art must be ready for use. These include the number of colours, palettes, resolution, format, and size that need to be addressed.
(Require Screenshots)

5.1.2 2D/3D Modelling and Animation
Describe the production of 3-D artwork through the selected authoring tool (rendering, preparing for production of 3-D artwork). 3-D animation development needs to follow the story flow in the storyboards and scheduled period in the Gantt chart.
(Require Screenshots)

5.2 RECORDING AND DIGITIZING AUDIO
Explain the voice-over process (or a composer, if music is used) to be embedded in the project (application), performers and time schedules after the recording session is scheduled.

5.3 IMPLEMENTATION
This stage focuses on project (application) delivery to the users. The rendered application is now accessible to users (e.g. installed on a server). Explain the reason for the selected delivery format.

5.4 EVALUATION/TESTING (Post-Production)

PROJECT DEVELOPMENT, IMPLEMENTATION AND EVALUATION (Production and Post-Production of E-Learning Application and Game Development)

6.1 INTRODUCTION
Briefly describe the chapter and the final product of the project. This stage focuses on the production of project's content. The content can vary considerably, depending on the available resources (e.g. the combination of various media such as animation and video).

6.2 APPLICATION DEVELOPMENT (Production)
Explain the development of media and interactive components.

6.2.1 Digitizing 2D/3D Art
Digitization of all the characters for electronic medium. Electronically generated art as well as digitized art must be prepared for implementation. These include the number of colours, palettes, resolution, format, and size that need to be addressed.
(Require Screenshots)

6.2.2 Digitizing Scenes
The whole storyline should be transformed into visual format (digital) according to thestoryboard.
(Require Screenshots)

6.2.3 Recording and Digitizing Audio
Explain the voice-over process (or a composer, if using music) to be embedded for the application, performers and time schedules after which the recording session is scheduled.

6.2.4 Authoring
All the pieces come together in the authoring tool. Functionality is programmed, and 2-D animation is developed. At this stage, the final working product is created.
(Require Screenshots)

6.3 IMPLEMENTATION
This stage focuses of project (application) delivery to the users (learners). The rendered application is now accessible to users (e.g. installed on a server).

6.4 EVALUATION/TESTING (Post-Production)

Example (report)

4.1 CONTENT DEVELOPMENT (Production)

This section discusses on the content development process in further details which includes the Digitizing 2D Art (Section 4.1.1), Digitizing Scenes (Section 4.1.2), Recording and Digitizing Audio (Section 4.1.3) and Authoring (Section 4.1.4).

4.1.1 Digitising 2D Art

The digitising 2D process using Adobe Illustrator for tracing the sketches into creating vector assets. Table 6 below shows the details needed to create the assets. There are several numbers of RGB colours palette that have been used in assets development. Figure 12 shows setting interface of Adobe Illustrator before creating the file project and workspace in Figure 13. The resolution chosen for the project file is 1920x1080p and exporting all the asset in .PNG format.

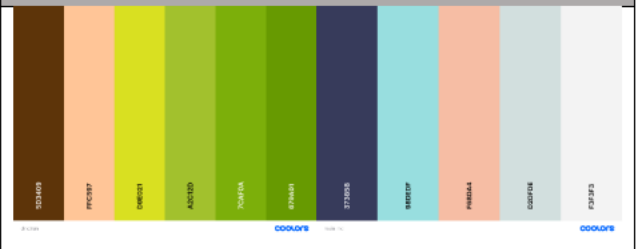
Requirement	Details
Colour palettes	
Resolution	1920 x 1080p
Format	.png

Table 6 Formatting 2D Assets

Example (report)

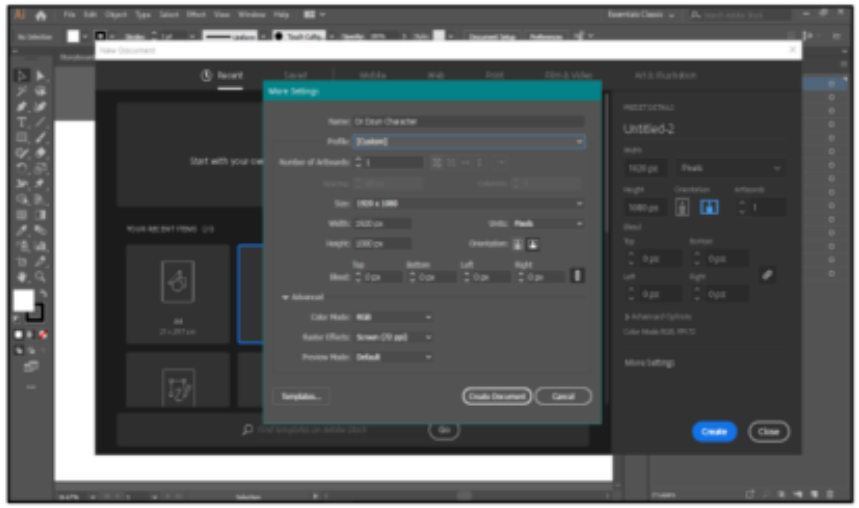


Figure 12 Create New Project in AI

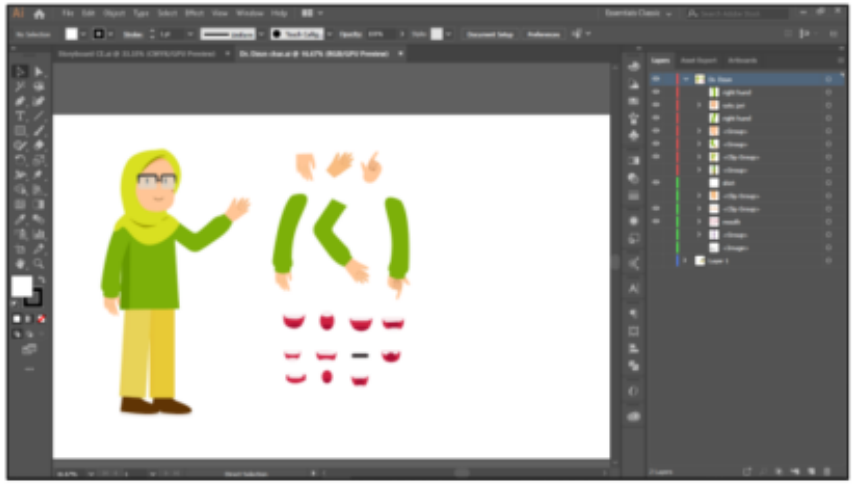


Figure 13 AI design workspace of Instructor Character

Example (report)

4.1.2 Digitising Scenes

After completing the assets, Adobe After Effects had been utilised for digitising scenes according to scenes in the storyboards. Digitising scenes in Adobe After Effects can be done using a variety of techniques, depending on the desired outcome from the storyboards. Some common methods including scene detection, frame blending, keying, lip-sync movement and tracking. Once a scene has been digitised, the scenes can be manipulated in variety of ways to create the desired effect. For instance, the objects can be added or removed, textures can be applied, and colours can be changed. Figure 14 and Figure 15 are the examples of workspace in the Adobe After Effects during digitising the scenes.

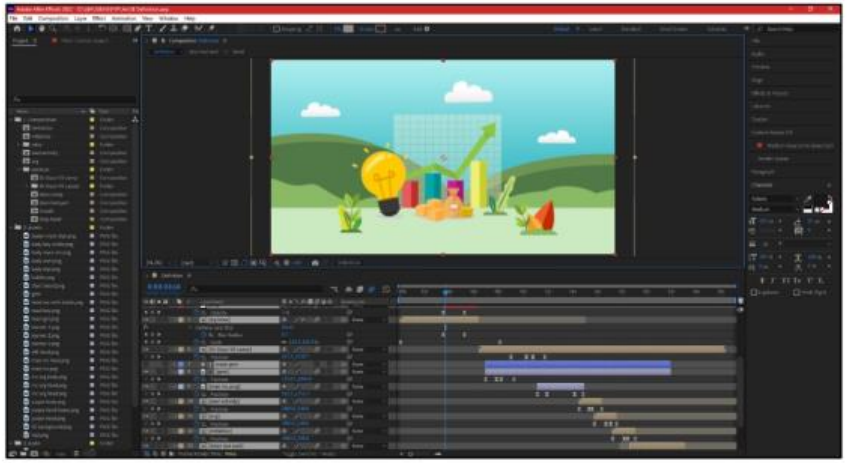


Figure 14 After Effect (AE) Workspace

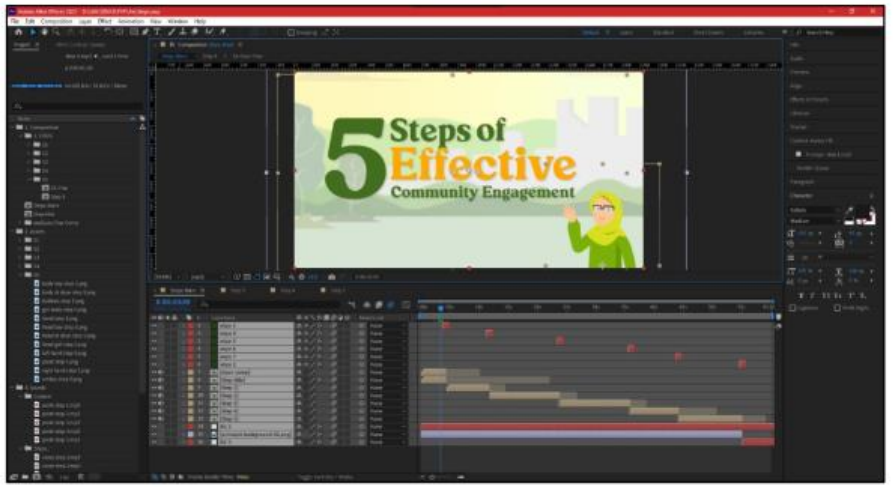


Figure 15 AE Workspace for Topic 1.3

User Acceptance Testing (UAT)

Testing – Important Dates

FYP IMPORTANT DATES

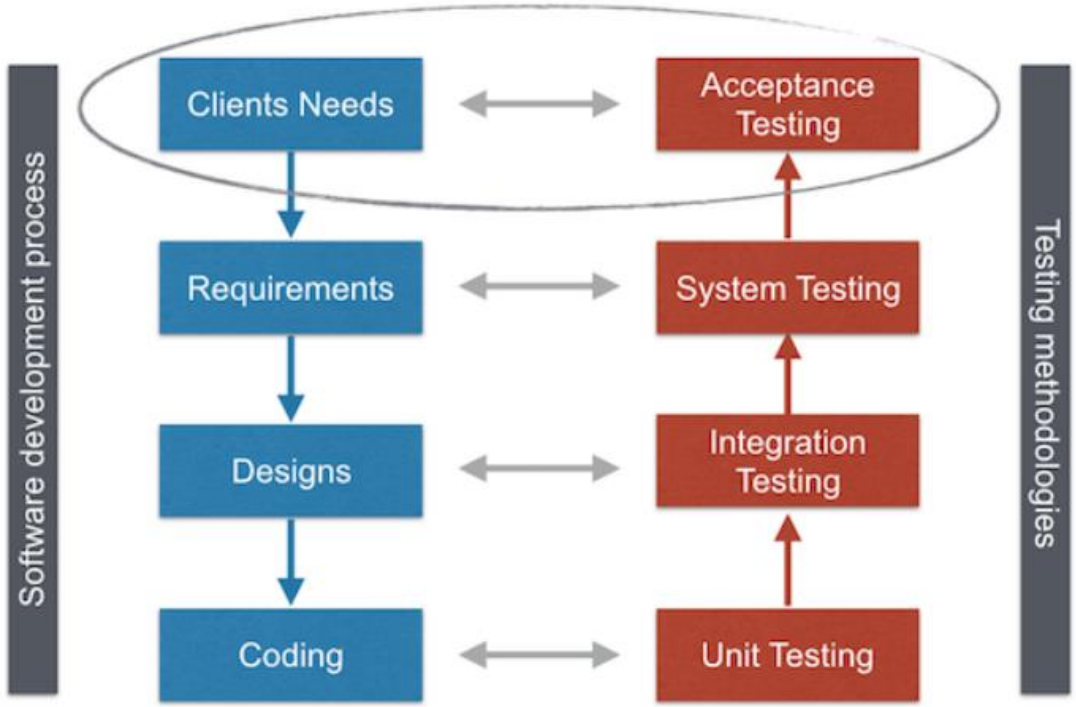
FYP 2 Important Dates

Week	Description	Deadline	Assessment	Remark
1	Supervisor Consultation & Submission of Group Work Distribution		Group Work Distribution	Discussion with the supervisor.
4	Supervisor Consultation & Submission of Development Progress 1 (40% Project Completion)		40% Project Completion	Presentation to the supervisor.
6	Supervisor Consultation & Submission of Development Progress 2 (50% Project Completion)		50% Project Completion	Presentation to the supervisor.
8	Supervisor Consultation & Submission of Development Progress 3 (70% Project Completion)		70% Project Completion	Presentation to the supervisor.
10	BETA Testing (100% Beta completion) by the supervisor.		100% completion of the project.	Evaluation by the supervisor.
12	Submission of the FYP Technical Report (chapter 1 to 5), Turnitin Report and the showcase poster on the FYP dashboard.		The FYP Technical Report (Chapter 1 to 5) and the showcase poster will be assessed during the FYP Showcase.	Assessment by the appointed examiners.
13	FYP Showcase - Assessment by the appointed examiners. Submission of the Final FYP Report (Chapter 1, 2, 3, 4 and 5) and Turnitin Report to the Supervisor.		INNOVATEX (FYP Showcase) - FYP Technical Report, Final Report, Poster and the product (System Development or Multimedia).	Assessment by the supervisor and the appointed examiners.

Testing with the users can only be done once the supervisor has tested the application or system.

User Acceptance Testing (UAT)

- User acceptance testing (UAT) is the last phase of the software testing process. During UAT, actual software users test the software to make sure it can handle necessary tasks in real world scenarios, according to specifications.
- UAT is one of the final and critical software project procedures that must occur before launching a new software to the market.



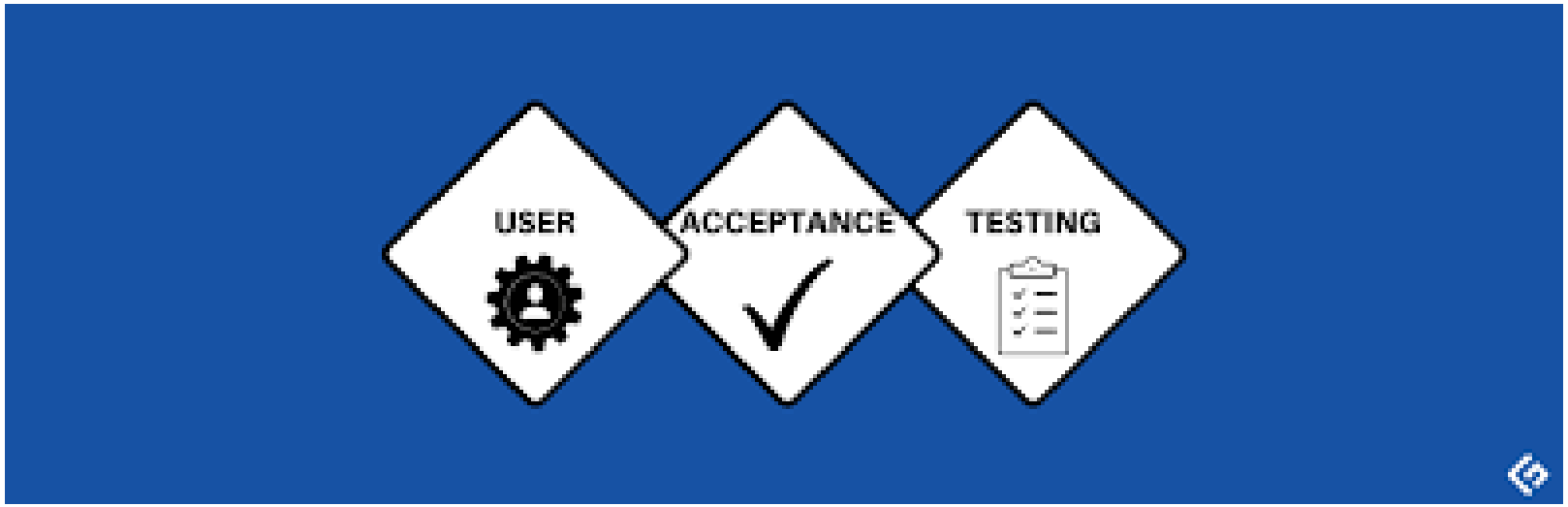
Why UAT?

- Confirm the system met the criteria.
- Identify and resolve discrepancies (if there is any).
- Determine the readiness of the system for live operations.

If a defect is found in…	The cost to fix that defect is…
Requirements Analysis	$1
Design	$7
Implementation/Testing	$40
Production	$100

The goal of UAT

The goal of User Acceptance Testing is to assess if the system can support day-to-day business and user scenarios and ensure the system is sufficient and correct for business usage.



Objectives of UAT

- To confirm that the system / product performs business functions as intended.
- To confirm that the system / product is usable from end user perspective (operational, ease-of-use).
- To confirm that the system / product is compliant with any regulatory and/or legal requirements.
- To satisfy that the system / product is deemed ready to move into production.

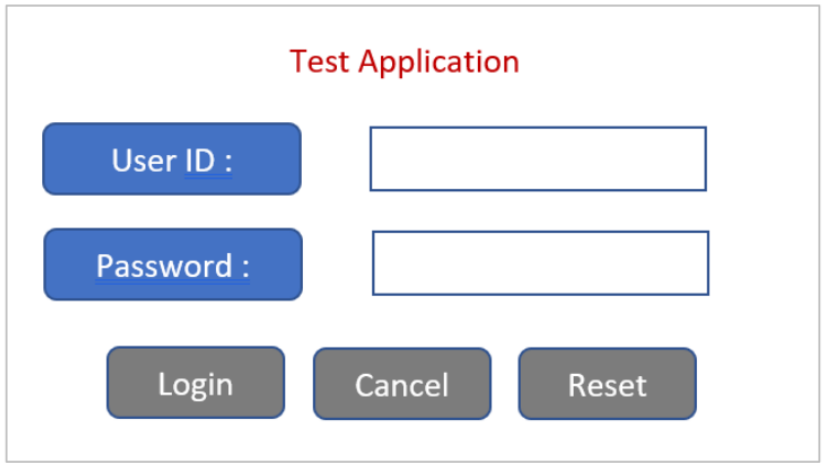
Pre-requisites of UAT

- Business Requirements must be available.
- Application Code should be fully developed
- Unit Testing, Integration Testing & System Testing should be completed

How many numbers of users for testing?

- Minimum number of users – THREE.
- Users should be sampled from the actual targeted users, i.e., if the project is for KICT students, then the users should be KICT students, not students from other Kulliyyahs.

Test plan



Here we can see **Login**, **Reset** and **Cancel** buttons on the page which will perform the respected functions when clicked.

So your ***test scenario*** would be....

Module Name / Requirement ID	Test Scenario ID	Test Scenario Name	# Of Test Cases
Login Module	TS_001	Check Login Functionality	4
Login Module	TS_002	Verify Reset Functionality	2
Login Module	TS_001	Verfiy Cancel Functionality	2

Test plan (continued)

So your ***test scenario*** would be....

Module Name / Requirement ID	Test Scenario ID	Test Scenario Name	# Of Test Cases
Login Module	TS_001	Check Login Functionality	4
Login Module	TS_002	Verify Reset Functionality	2
Login Module	TS_001	Verfiy Cancel Functionality	2

Test Scenario Template						
Module Name / Requirement ID	Test Scenario ID	Test Scenario Name	# Of Test Cases	Test Case ID	Test Case Name	Comments
Login Module	TS_001	Verify Login Functionality	4	TC_001	Verify User is able to login with CORRECT User Id and Password	
				TC_002	Verify User is NOT able to login with INCORRECT User Id and CORRECT Password	
				TC_003	Verify User is NOT able to login with CORRECT User Id and INCORRECT Password	
				TC_004	Verify User is NOT able to login with INCORRECT User Id and INCORRECT Password	
Login Module	TS_002	Verify Reset Functionality	2			
Login Module	TS_001	Verfiy Cancel Functionality	2			

Test Result

Current Build Number:	
URL For application:	
Username:	
Password:	

Features/Module	No. of new Test Cases Developed in this build	Total No. of Test Cases	No. Test Cases Executed in this builg	No. of Passed Test Cases in this build	No. of Failed Test Cases in this build	No. of Defects found in this build	Total Number of Open Defects	No. of Defects Closed in this build	No. of Defects Reopened in this build
Total									

UAT – System Development

UAT – System Development

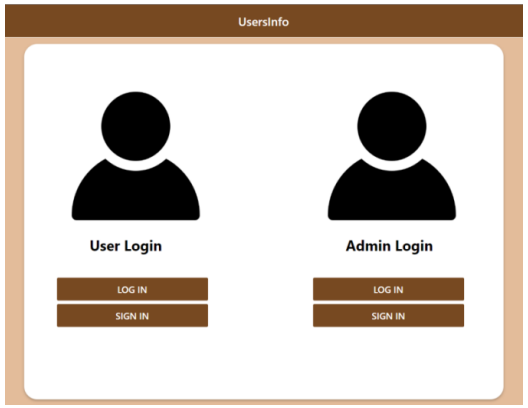
SYSTEM TESTING

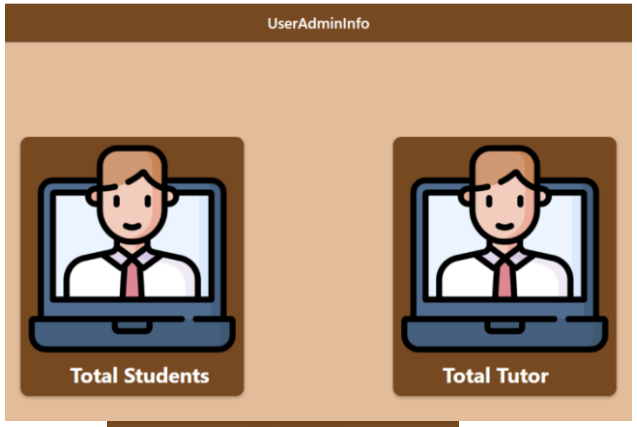
- Preface statements or subject of introductory to this subtopic.

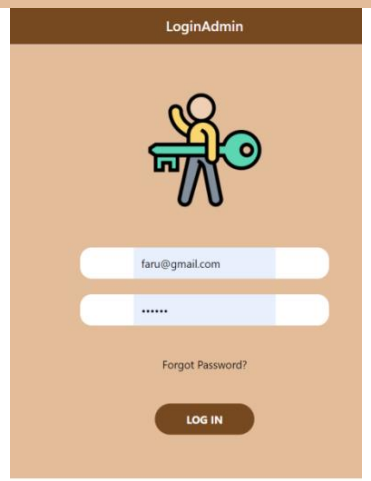
- Test Plan
  - State the test plan and activities involved and draw a conclusion from the test plan and state the comments given by the users (e.g., User Acceptance Test (UAT), etc.).
- Enhancement
  - Based on user testing, what are the functions and modules that need improvement?

Example – System testing (Preface)

The User Acceptance Test (UAT) was conducted face-to-face in IIUM Gombak Selangor, Kuala Lumpur, Malaysia. It was conducted on May 25, 2023, for all three participants. The first two participants were final year students, and the other participant was first year students of KICT. These three participants were interviewed during the data collection, and they knew the objective of this project and the background problem.







Example – Test Plan

PAGES	TEST DATA	TEST CONDITION	EXPECTED RESULT	ACTUAL RESULT (√)	REMARKS
Welcome Page	N/A	The Get Started button is working.	Users can navigate to the Login / Sign up page.		
Sign up/ Registration	Email and Password	Sign up button is working.	New users can navigate to the dashboard page easily.		
Log-in Page	Email and Password	login button is working.	Existing authorized users can navigate to the dashboard page easily.		
Dashboard Page	N/A	button is working and users can view all the information.	Users can navigate and view all the contents.		
About KICT Page	N/A	N/A	Introduction		
Student Materials	N/A	N/A	Informative information about specialization.		
Services	N/A	Button is working and both pages	Users able to register.		

Example – Test Result

PAGES	TEST DATA	TEST CONDITION	EXPECTED RESULT	ACTUAL RESULT (√)	REMARKS
Welcome Page	N/A	The Get Started button is working.	Users can navigate to the Login / Sign up page.	√	Worked fine
Sign up/ Registration	Email and Password	Sign up button is working.	New users can navigate to the dashboard page easily.	√	Worked fine
Log-in Page	Email and Password	login button is working.	Existing authorized users can navigate to the dashboard page easily.	√	Worked fine
Dashboard Page	N/A	button is working and users can view all the information.	Users can navigate and view all the contents.	√	Worked fine
About KICT Page	N/A	N/A	Introduction	√	Worked fine
Student Materials	N/A	N/A	Informative information about specialization.	√	Worked fine
Services	N/A	Button is working and both pages	Users able to register.	√	Worked fine

Example - Enhancement

- All the participants of the User Acceptance Test suggested that the system should be added with more videos. The enhancement was done successfully. Explain further.

UAT – Multimedia

UAT - Multimedia

- Test Plan
  - State the test plan and activities involved. Write a conclusion from the test plan and state the comments given by the users.

- Enhancement
  - Based on user testing, what are the elements that need improvement?

Example - Test Plan

User acceptance testing (UAT), also known as beta testing, is the final stage of the ADDIE model, where the product is tested by the target users to ensure the contents meet the user requirements and are ready for release. A face-to-face session of User Acceptance Testing (UAT) is conducted on 1st June 2023 with three students from IIUM. The specifics of the test cases are available in APPENDIX C.

Insert some screenshots of the Test plan.

MM07: USER ACCEPTANCE TESTING

Test designed b [redacted]

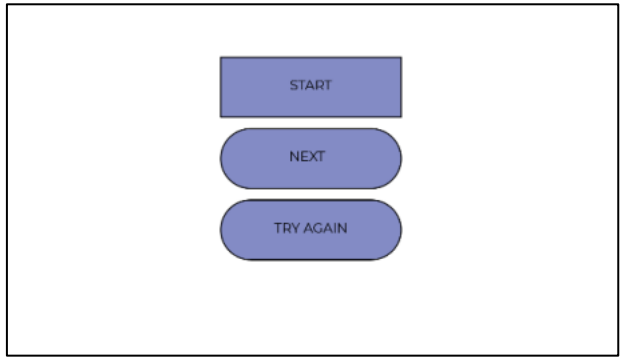
Test executed by:

Test execution date:

Test Case	Step	Test Step	Expected Result	Actual Result	Pass/Fail	Remarks
Test case 001: Video availability	1	Go to the 'Topic 1.1: Definition of Community Engagement.'	A video related to the topic appears.			
	2	Click the 'play' icon on the video.	The video is playing.			
	3	Scroll to the middle of the video.	The video keep playing.			
	4	Scroll to the end of the video.	The video plays until the end.			
Test case 002: Audio	1	Go to 'Topic 1.3: Steps of Effective Community Engagement'.	A video related to the topic appears.			
	2	Click on the video.	A video related to the topic appears.			

Figure 25 UAT Test Cases

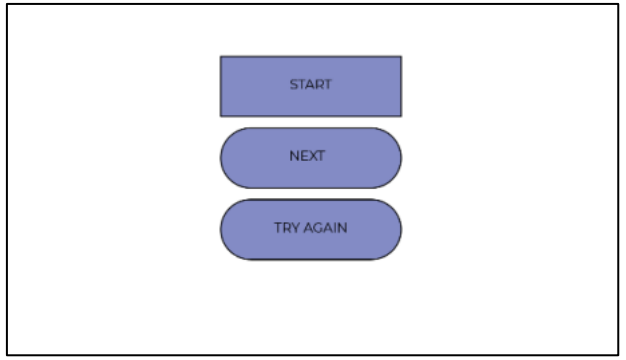
Example - Test Plan



Test Case	Step	Test Step	Expected Result	Actual Result	Status (Pass/ Fail)
Test Case ID: TC_001 Test Title: Verifying 'Start' button functionality on **Front Page**	1	Click the 'START' button.	Go to Menu Page		

'NEXT' button
'TRY AGAIN' button

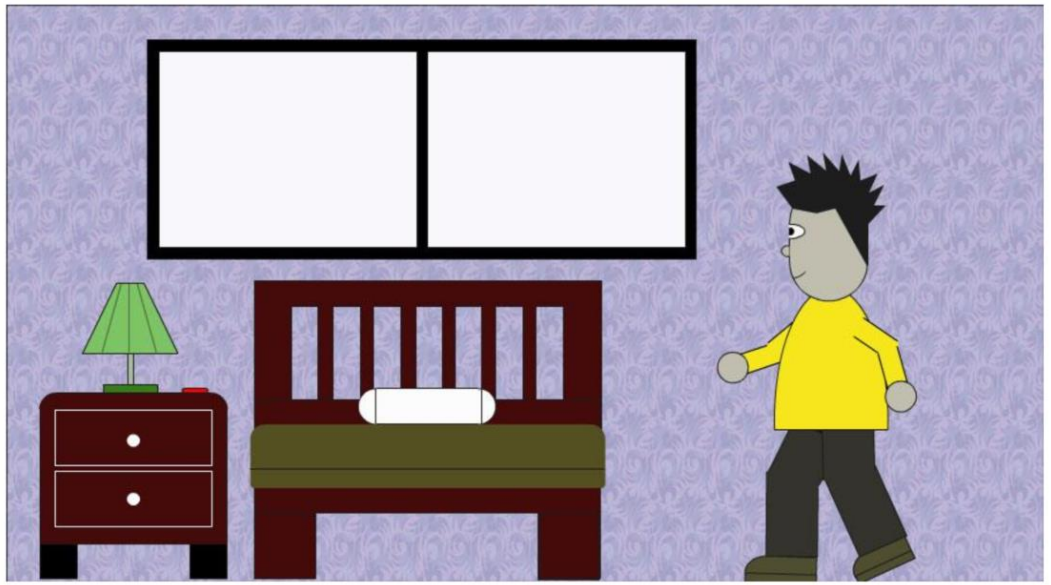
Example - Test Result

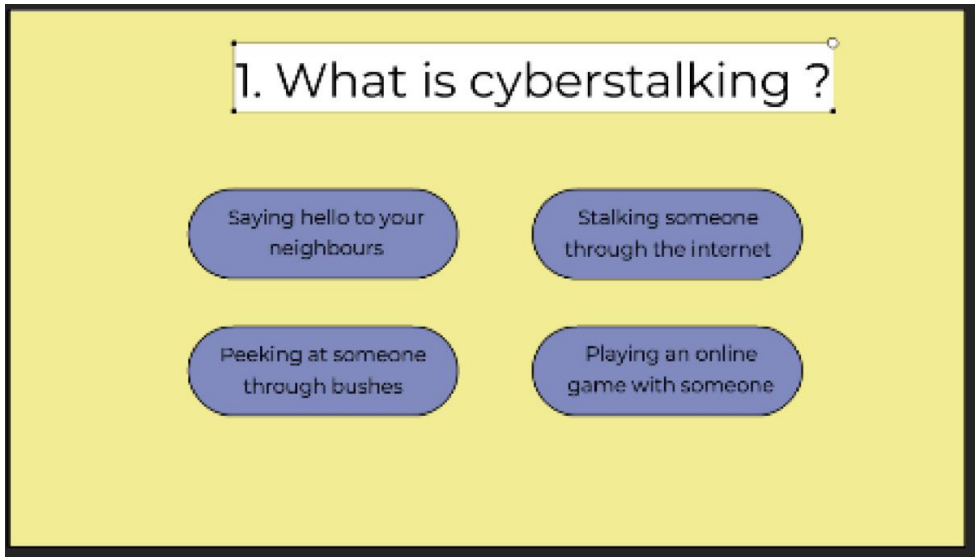


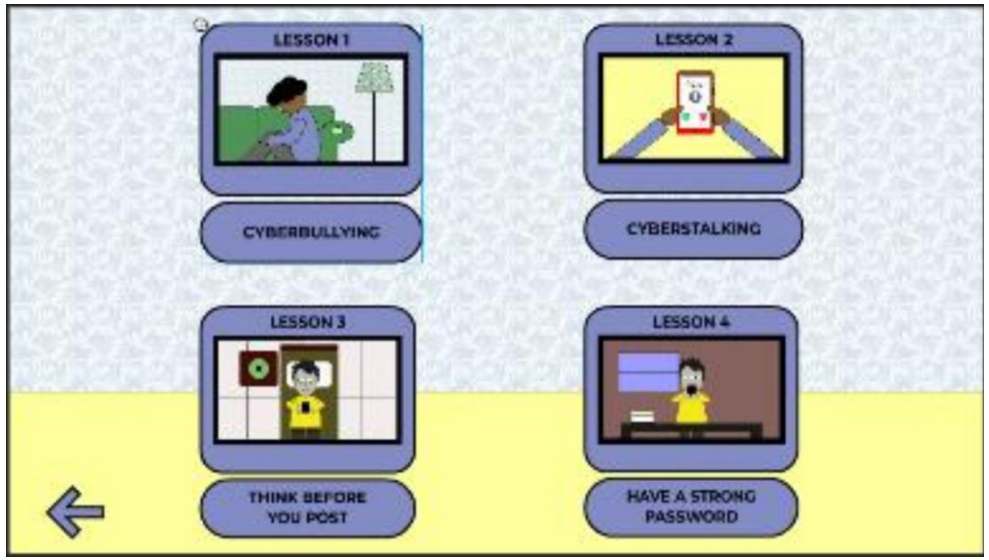
Test Case	Step	Test Step	Expected Result	Actual Result	Status (Pass/ Fail)
Test Case ID: TC_001 Test Title: Verifying 'Start' button functionality on **Front Page**	1	Click the 'START' button.	Go to Menu Page	The Menu Page is displayed.	Pass

'NEXT' button
'TRY AGAIN' button

Example - Test Plan







Example - Test Result

Test Case	Step	Test Step	Expected Result	Actual Result	Status (Pass/ Fail)
Test Case ID: TC_007 Test Title: Verifying option buttons functionality for **Cyberbullying including Quiz 1, 2 and 3.**	1	Click the 'Lesson 1 (Cyberbullying)' button.	The animation video will be played.	The animation video is playable.	Pass
	2	**Quiz 1 -** Click the 'Stalk a victim' button.	Wrong answer.	The answer for the quiz is wrong.	Pass
	3	Click the 'TRY AGAIN' button.	Go back to Quiz 1.	Go back to the question.	Pass
	4	Click the 'Trick used to cheat someone' button.	Wrong answer.	The answer for the quiz is wrong.	Pass
	5	Click the 'TRY AGAIN' button.	Go back to Quiz 1.	Go back to the question.	Pass
	6	Click the 'Unintentional disclosure information' button.	Wrong answer.	The answer for the quiz is wrong.	Pass
	7	Click the 'TRY AGAIN' button.	Go back to Quiz 1.	Go back to the question.	Pass
	8	Click the 'Sending mean or hurtful messages' button.	Correct answer.	The answer for the quiz is correct.	Pass
	9	Click the 'NEXT' button	Proceed to Quiz 2	Quiz 2 is displayed.	Pass
	10	**Quiz 2 -** Click the 'Ignore or block the person' button.	Wrong answer.	The answer for the quiz is wrong.	Pass
	11	Click the 'TRY AGAIN' button.	Go back to Quiz 2.	Go back to the question.	Pass
	12	Click the 'Tell your parents or a teacher' button.	Wrong answer.	The answer for the quiz is wrong.	Pass
	13	Click the 'TRY AGAIN' button.	Go back to Quiz 2.	Go back to the question.	Pass
	14	Click the 'Save the messages as evidence' button.	Wrong answer.	The answer for the quiz is wrong.	Pass
	15	Click the 'TRY AGAIN' button.	Go back to Quiz 2.	Go back to the question.	Pass

Example - Test Result

Test Case	Step	Test Step	Expected Result	Actual Result	Status (Pass/ Fail)
	16	Click the 'Get in the fight with the person at school' button.	Correct answer.	The answer for the quiz is correct.	Pass
	17	Click the 'NEXT' button	Proceed to Quiz 3	Quiz 3 is displayed.	Pass
	18	**Quiz 3 -** Click the 'Skip school' button.	Wrong answer.	The answer for the quiz is wrong.	Pass
	19	Click the 'TRY AGAIN' button.	Go back to Quiz 3.	Go back to the question.	Pass
	20	Click the 'Get bad grades' button.	Wrong answer.	The answer for the quiz is wrong.	Pass
	21	Click the 'TRY AGAIN' button.	Go back to Quiz 3.	Go back to the question.	Pass
	22	Click the 'Have health problems' button.	Wrong answer.	The answer for the quiz is wrong.	Pass
	23	Click the 'TRY AGAIN' button.	Go back to Quiz 3.	Go back to the question.	Pass
	24	Click the 'All of the above' button.	Correct answer.	The answer for the quiz is correct.	Pass
	25	Click the 'MENU' button	Go back to the Menu Page.	Menu Page displayed.	Pass

Example - Enhancement

Based on the comments from the testing that had been conducted, the contents require further improvement despite having all the interactivity functioning well. The look and feel of the learning content is important, the module may require detailed guideline on navigation flow of interactive contents to help user easy to navigate. For example, in Topic 1.2: Principles of Community Engagement. Other than that, improvement in captions style also increase the font size to ensure learners especially who are deaf or hard to hearing can understand the contents.

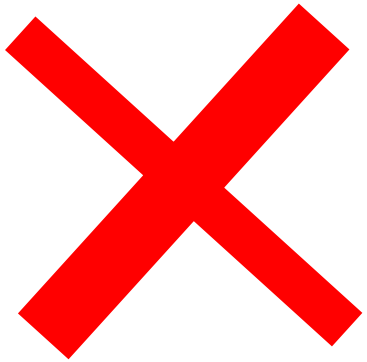
Test plan and Test result

The detailed test plan and results should be included in the Appendix.
The result of the test should be reported in the FYP Report.

NOT ALLOWED

- Questionnaires, Usability Testing or equivalent.

	The Computer System Usability Questionnaire Version 3		Strongly agree 1	2	3	4	5	6	Strongly disagree 7		NA
1	Overall, I am satisfied with how easy it is to use this system.		○	○	○	○	○	○	○		○
2	It is simple to use this system.		○	○	○	○	○	○	○		○
3	I am able to complete my work quickly using this system.		○	○	○	○	○	○	○		○
4	I feel comfortable using this system.		○	○	○	○	○	○	○		○
5	It was easy to learn to use this system.		○	○	○	○	○	○	○		○
6	I believe I became productive quickly using this system.		○	○	○	○	○	○	○		○
7	The system gives error messages that clearly tell me how to fix problems.		○	○	○	○	○	○	○		○
8	Whenever I make a mistake using the system, I recover easily and quickly.		○	○	○	○	○	○	○		○
9	The information (such as online help, on-screen messages, and other documentation) provided with this system is clear.		○	○	○	○	○	○	○		○
10	It is easy to find the information I needed.		○	○	○	○	○	○	○		○
11	The information provided with the system is effective in helping me complete my work		○	○	○	○	○	○	○		○



Chapter 5 - Conclusion

Chapter 5

- PROJET REQUIREMENT
  - State the completed and uncompleted requirements for your project. Refer to chapter 3. Explain why the requirements are not completed.
- PROJECT CONSTRAINT
  - State the limitations of the project and explain why. For example, a mobile app that uses internal storage would not be able to share data with other users. Do not include time constraint! (This indicates that you are doing your work at the last minute).
- FUTURE ENHANCEMENT
  - What are the modules, functions, features, or system capabilities that need improvements in the future? State them in this section. This will allow other students to extend or implement the stated enhancements in the future.
- CONCLUSION
  - Summarize the important points, the limitations and enhancements for the project.

Project Requirement - Examples

5.0 PROJECT REQUIREMENT

The developers have successfully completed a project based on the given requirements. The project is interactive and encompasses all multimedia elements, including images, texts, audio, and animation. Not only concerning the user interface, but the use of words and speech must be simple and easy to understand for the user, as one of the project's objectives is to educate the users. The result of the evaluation shows that all the mentioned requirements have been met and the project is completed.

Project Constraint - Example

5.1 PROJECT CONSTRAINT

The project faced challenges due to the laptop's performance and the lack of support for the software used on any devices. To develop animations using software like Adobe Animation and Adobe Illustrator, a high-performance device is necessary. Additionally, with Adobe discontinuing support for Flash Player and blocking flash content from running in Flash Player since the end of 2020, the developers encountered problems executing the project as Adobe Flash Player is the platform for running the application. Therefore, the developers had to resort to using the older version of Flash Player 3.2 as an alternative.

Future Enhancement - Example

5.2 FUTURE ENHANCEMENT

For future enhancement, some elements will be added for better improvement. For instance, a better style of closed captioning, which provides transcripts of audio content, making it accessible to learners who are deaf or hard of hearing. Additionally, zooming and panning to magnify and move around the content and text, aiding in making the learning process easier for learners to see and read the contents or quizzes. Lastly, there is a focus on discovering more interactive content accessible for different devices such as smartphones, tablets, and laptops.

Conclusion- Example

5.3 CONCLUSION

In conclusion, this project has been successfully completed by the developers, despite encountering challenges. There were numerous issues with the devices used and errors occurred whenever the developers attempted to compile more than one file. However, these difficulties were professionally managed by the developers, ensuring the project was completed as scheduled. For future enhancements, there are considerations such as updating the layout of the application, broadening the scope, and ultimately improving the smoothness of the animation.

Credits

Credit to projects being cited in this slides:

- Youth CyberSafe
- Integrated And Sustainable Urban Farming: Urban Farming & Community Engagement & Social Entrepreneurship
- E-Service Application for KICT Students