

**Project Topic:** CSIT-20-S3-07 Financial Market Simulator

**Project Group:** FYP-20-S3-09

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### Project Description:

"Final-year-project (FYP) is an essential part of the degree course that you have to complete. The objective of this project is to develop your ability to develop a reasonably complex software application system. The project will expose you to the real-life application development activities, and will develop your ability to handle the definition, design, programming and documentation of non-trivial software project.

In this project, the group is expected to develop a **Financial Market Simulator**.

Financial markets are volatile and depend on many different factors. For example, a big world event can cause the financial market to crash, or a trade deal between two countries might stir investor confidence.

The purpose of this project is to **analyse financial markets data patterns** in order to **predict how the market will react to world events**."

### Assumed Knowledge and Difficulty.

**Web design, Portal development, and programming**

### Platform, Key Technologies

The team is to propose **any programming language** suitable for the **selected mobile device**.

### Additional Resources

The group should provide all the hardware necessary for this project in particular during the demo.

**Planned Schedule:** Created on: 7/4/2020

Tasks	Target Date	Activities and Deliveries
<b>Term 1 Start:</b>	4 July 2020	
<b>End:</b>	19 September 2020	
<b>Project Briefing (Week 1)</b>	4 July 2020	Start of final year project. Project members attending the 3-hour lectures conducted by Mr Tan Kheng Teck.

Tasks	Target Date	Activities and Deliveries
Forming the team (Week 1)	11 July 2020	<p>Familiarize yourself with what is required of the Project; the deliverables and templates that you may need for your reports.</p> <ul style="list-style-type: none"> <li>You can refer to the following sites for template for a Project Proposal, Requirement Specification, Project Status Report                <a href="https://www.projectmanager.com/templates/project-proposal-template">https://www.projectmanager.com/templates/project-proposal-template</a>  <a href="https://www.projectmanagement.com/deliverables/238236/System-Requirements-Specification">https://www.projectmanagement.com/deliverables/238236/System-Requirements-Specification</a>  <a href="https://krazytech.com/projects/software-requirements-specification-report">https://krazytech.com/projects/software-requirements-specification-report</a>  <a href="https://www.projectmanagementdocs.com/template/project-monitoring-and-controlling/project-status-report/#axzz6lecxtUD9">https://www.projectmanagementdocs.com/template/project-monitoring-and-controlling/project-status-report/#axzz6lecxtUD9</a> </li> <li>Other useful Project Management templates can be obtained from this site:                <a href="https://www.projectmanager.com/pm-templates">https://www.projectmanager.com/pm-templates</a> </li> </ul> <p>Students are to identify a team leader and to come out with team members' profile and planned leaves/overseas trip for the next six months. Please also discuss and agree on how project work is going to be distributed, the arrangement (Frequency and format) for team meeting and updating of documents (eg googledrive, googledoc, etc)</p> <p><b>Deliverable: Identification of team leader, team member profile, agreement on arrangements for distribution of project work, frequency &amp; format of team meetings and updating of documentation.</b></p>
Setting up of Project Website and coming out of project proposal (Week 3)	25 July 2020	<p>To finalize the templates for all your deliverables.</p> <p>To set up project website. Project website need not be sophisticated. A Website consisting of a main page describing the objective as well as the project, a page consisting of information of the project members (Who is who), and a page consisting of all project documentations (works in progress) for communication among team members.</p> <p><b>Please email me your progress update</b> of (1) finalization of your report templates (2) creation of Project Website.</p>

Tasks	Target Date	Activities and Deliveries
		<p>To do a literature review and submit a project proposal at the <b>end of Week 3 (Saturday)</b>.</p> <p>When you do your literature review, try to answer the following questions: What do you know about Web page design? What is a portal? What is fund raising activities? How to do marketing/marketing strategy, etc.? How to create a discussion forum? How to integrate to payment gateway? etc. Any similar application/product currently implement such simulator? Anything that you think are good or useful but not available in existing product in the market. etc. You may also like to look at software development methodologies and programming languages, if you have not already known them.</p> <p><b>Implementation</b> - How do you plan to implement your project? What algorithm and how to apply your algorithm/technique? What are the recent developments in the area you are doing? Do you have any case study to support your case?</p>
<b>Requirement (Week 4 - 5)</b>	<b>8 August 2020</b>	<p>Gather information on the requirements of the project.</p> <ul style="list-style-type: none"> <li>• The project team is to identify the system's services (functionalities), constraints and goals of the project.</li> <li>• Identifying the various functionalities, algorithms as well as interfaces required from three perspectives - functional, non-functional, and security. The team is to produce a preliminary System Requirement Specification. include a System Requirement Specification.</li> </ul> <p><b><u>Deliverable:</u> Project Requirements documentation</b></p>
		<ul style="list-style-type: none"> <li>• It is highly recommended that the team write or manage a project progress report constantly. For each week's works on the project, records the progress of all activities.</li> <li>• Each team member is also reminded to constantly write your individual project diary.</li> </ul> <p><b><u>Deliverable:</u> Project Website and Project Proposal</b>  (Please zipped your <b>Project Proposal</b> and <b>Project Requirement Specification</b> and submit your zipped file through submission link via Moodle. <b>DO NOT</b> be late. For each day late, a 25% of the component assessment will be deducted. Please refer to the "Penalties for late submission of assessment items." section described in the Subject Outline.)</p>

Tasks	Target Date	Activities and Deliveries
<b>Analysis and Design (Week 6)</b>	15 August 2020	<p>The project team needs to start with solution for the implementation of the project.</p> <ul style="list-style-type: none"> <li>• The team is to produce the software design such as the Architectural Designs, AI logic design (if applicable) as well as Database Design of the system (if applicable).</li> <li>• Each team member is reminded to write his/her own individual project diary.</li> </ul>
<b>Examination break (Week 7-8)</b>	29 August 2020	<p>You may take two weeks break for your final examination.</p> <p>You may need a break from the project to concentrate on your final examination. Good luck to your final examination!</p> <p>Some of you may finish your examination earlier, please continue to work on the design of your project soon after.</p>
<b>End of Term 1 and Start of Term 2 (Week 9 - 11)</b>	19 September 2020	<p>The project team needs to continue working on the project designs. Do not forget to come out with a prototype for the project assessment at end of Week 11.</p> <p><b>Please start this earlier (as soon as you have finished your final examination). Please note that at the end of week 11, you need to have your prototype ready for 1st project assessment by project assessor.</b></p>

Tasks	Target Date	Activities and Deliveries
Term 2 Start : End:	19/09/2020 21/11/2020	
Implementation and FYP progress assessment plus prototype demonstration (Week 12)	19 September 2020	<p>If the project has not been progressing, you need to work very hard. We are at the mid-point now. The team should by now be implementing the solution for the specified functionalities and had your project prototype completed for assessment.</p> <p>At the end of this week (Week 12), you will be attending the second briefing by project assessor and demonstrating the project prototype to the assessor. <b>Please DO NOT miss this assessment (prototype demonstration.) No mark will be given (awarded) for absentee.</b></p> <p><b><u>Deliverable: Prototype demonstration and Project Progress Report.</u></b> Project Progress Report is to be submitted via Moodle by the stipulated due date and time. DO NOT be late. For each day late, a 25% of the component assessment will be deducted. Please refer to the "Penalties for late submission of assessment items." section described in the Subject Outline.</p> <p>What to include in your Project Progress Report?</p> <ul style="list-style-type: none"> <li>- Outcome on your researches,</li> <li>- progress on setting up of project website,</li> <li>- progress on requirement analysis,</li> <li>- progress on the conceptualization of ideas,</li> <li>- progress on identification of use cases,</li> <li>- progress on production of requirement specification,</li> <li>- and any others that deem necessary.</li> </ul>
Implementation (Week 12 - 17)	31 October 2020	<ul style="list-style-type: none"> <li>• Continue to work on the development, and remember to carry out the unit testing as well as integration testing according to the test plan.</li> <li>• As the team continues to develop, there might be changes to the original project documentations. Update and baseline your documents.</li> <li>• The team is to produce a System Test Case and test log, if any.</li> <li>• Remember to keep updating your Project Progress Report.</li> <li>• Each team member is reminded to write your individual project diary.</li> </ul>

Tasks	Target Date	Activities and Deliveries
Testing (Week 18 - 19)	14 November 2020	<ul style="list-style-type: none"> <li>• The team is to carry out the Integration Test.</li> <li>• The team is to finalize the implementation of the project.</li> <li>• The team is to produce the User Manual for the system.</li> <li>• Remember to finalize your Website if you have not done so.</li> <li>• <b>Important!!! Finalize all the project documentation and get your project supervisor to sign before you submit your deliverables via Moodle.</b> If these are not met, a Withheld (WH) mark can be awarded until the requirements is to the satisfaction of the client and/or supervisor.</li> </ul> <p>Please read the "Final Product, Documentation, and presentation" section of the Subject Outline for the module for more information on submission requirements.</p> <p><b>Deliverable: Final product and documentation.</b> The final product and documentation consists of the following:</p> <ul style="list-style-type: none"> <li>(i) Source code</li> <li>(ii) User manual</li> <li>(iii) Technical report (Technical Report should consists of Project Requirements Specification and Project Design Specification)</li> <li>(iv) Technical manual</li> <li>(v) Testing documentation</li> <li>(vi) Final website (for marketing purposes)</li> <li>(vii) Individual Contribution Statement (duly signed by all members.)</li> <li>(viii) Reflective diary (individual).</li> </ul>
		<p><b>Items (i) to (vii) are group based. Only one submission per team. For item (viii), it is an individual deliverable.</b></p> <p><b>Every team member must submit his/her own individual diary.</b></p> <p><b>If the source code, testing documentation are too large to be uploaded via Moodle, save them in USB thumb drive and submit.</b></p> <p><b>Please take note of the deliverable. If you are not sure, please check with your supervisor. ANY OF THE DELIVERABLE IS INCOMPLETE, THE PROJECT ASSESSOR MAY NOT ASSESS YOUR PROJECT.</b></p>
Prepare for Project Presentation and Demonstration of product (Start of Week 20)	21 November 2020	<p><b><u>Days before 22 Aug 2020</u></b></p> <ul style="list-style-type: none"> <li>• The team is to wrap up the development and prepare for the project presentation.</li> <li>• Prepare anticipated questions and answers.</li> <li>• Identify every team member's roles in the presentation and carry out rehearsals before presentation.</li> <li>• To present the final product to the project supervisor.</li> </ul>
Final Year Project Presentation (End of Week 20)	21/11/2020	<p>The team is to do a presentation (FYP presentation) to the FYP panel of supervisors and assessors on the FYP presentation day (End of this week.)</p>