ASSIGNMENT BRIEF

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| Module Code | COM5006 | Module Leader | | Dr Andrew Guest | |
| Module Title | Design Patterns For Games | | | | |
| Level | 5 | Credit Value of Module | | 20 | |
| Assessment Task | Group design, build & documentation | | | | |
| Word Count | Project Documentation 6000 Words, Reflective Report 1000 Words. | | | | |
| Assessment No | 1 | of | 1 | Weighting | 100% |
| Type of Submission | Portfolio | | | | |
| Method of Submission | Electronic through moodle & gitlab | | | | |
| Publication Date | 22/10/21 | | | | |
| Due Date | 25/01/22 12:00pm (Noon) | | | | |
| Expected Feedback Date | 15/02/22 | | | | |
| Resit Date | April 2022 | | | | |
| Format of Feedback | Through moodle | | | | |
| Anonymous marking | Not anonymous. Documentation is closely linked to code and code cannot be anonymous.  Code of Assessment 29.5.2  c) Subject-specific skills exercises or product creation e.g. artwork, product design, video production, performances.  f) Collaboratively produced or peer-marked assessments e.g. group work. | | | | |
| Learning Outcomes | | | | | |
| 1. Design, analyse and develop a computer system using appropriate software engineering as part of a team using appropriate design patterns; 2. Apply a high level of project management skills, technical knowledge, and creative techniques to the production of a computer systems project; 3. Critically evaluate professional codes and legal requirements in the context of systems development. | | | | | |
| Assignment Description | | | | | |
| **Overview**    For this module you have to design and develop an application or game. You will work in groups to design and develop the application/game using the Agile Scrum methodology using appropriate design patterns.  Each group is required to submit the completed code and a project document detailing the process of developing the software. Each individual student should also submit a reflective essay on the project.  The application source files and documentation should be uploaded to gitlab and the notification document completed and submitted through moodle. The notification document is available on moodle (The notification document simply identifies which students are members of the group and provides a link to the gitlab repository).  Any issues of students not engaging with the coursework should be brought to the attention of the lecturer as soon as possible. | | | | | |
| **The Application**  Your group has to analyse, design and develop an object oriented application or game using Python, following the Agile Scrum methodology and using appropriate design patterns.  You must choose one of the options below. Students will be allocated to groups based on their preference (or second depending on numbers). You can indicate your preference through moodle.  **Options**   1. **Passenger Manifest System** – Design and build an application that manages helicopter flights from Aberdeen airport to North Sea oilrigs. Helicopters pick up passengers from Aberdeen airport, fly out to a number of oil platforms, dropping off workers and picking up others who’ve completed their time offshore. This application will need to deal with multiple helicopters and multiple workers embarking and disembarking the helicopters at the airport and different platforms. It will also need to check if a worker has passed the required training courses before they are allowed to board the helicopter at the airport. The system should be able to create a schedule for each flight in advance, check the qualifications of workers before allowing them to board, be manually updated to check workers on and off the helicopter at each platform and produce a log of each flight after it is complete. 2. **Event Planning System**  - Design and build an event planning system. The system should allow the user to create multiple events. Each will have a name, an organiser, a description and create a list of invited people. It should track whether or not each invitee has RSVPd, whether or not they are bringing a plus one (and add that plus one as an invitee). It should be able to track if any invitee has any dietry or other requirements.The system should be able to store menus of set meals and track which invitees are having which meals. 3. **Final Fantasy Style Game (early version style)** – Design and build a JRPG in the style of the early Final Fantasy games. The game should feature moving around a map and random battles. The random battles should be turn based, where each turn the player chooses which action to take for each character and the enemies attack. There characters should each have unique abilities. There should be a range of enemies to fight, some with unique abilities.   For each of these options an extended description is available in Moodle.  There will be a start up session held in class. Each group should get together and discuss the brief for their chosen application/game. Each group will get a 30 minute session with the lecturer to ask for further details and clarifications.  Each group should run their project using the Scrum methodology. I recommend working in week long sprints. This is shorter than usual but given the time restrictions of the module is appropriate. I recommend you use the class session time after the lecture to have a team meeting to end each sprint and prepare the next. It would be good if you could have a quick break between the two but isn’t essential. At the end of each sprint start meeting everyone should know what they will be working on for the next week. | | | | | |
| **Submission**  For this assessment you are required to submit as a group –   * Your application source code in gitlab * Project Document   You are also required to submit as an individual   * Reflective Report   **Application Source Code**  The complete source code for your application. This should include a readme file with instructions on compiling and running the application.  **Project Document**  A document describing the project. It should be well structured with a title, contents, introduction and conclusion.  It should contain the following sections   * Application Description - a description of the application, its purpose, features, requirements, screenshots, etc. * Project management overview – overview of Scrum methodology, how you used it, the project schedule. * Initial Backlog - It should contain the full initial feature backlog list. * Sprints – for each sprint describe a summary of the plan, the review and the respective. Show the task board at the start and end of the sprint * Design Patterns – a discussion of each design pattern used – why it was used, how well it worked.   **Reflective Report**  A reflective report considering   * The project overall * The Agile Process * Design Patterns   It should also include   * At least one example of something that worked well * At least one example of something that worked poorly   At least one example of something that you would do differently next time. | | | | | |
| **Marking**  This assessment will be marked by rubric. The rubrics can be viewed in Moodle.  The marks break down as   * application 40% * project document 40% * reflective report 20% | | | | | |
| Assessment Regulations | | | | | |
| * Your attention is drawn to the University policy on academic misconduct ([Academic Misconduct Policy](https://www.yorksj.ac.uk/media/content-assets/registry/policies/code-of-practice-for-assessment/23.Academic_Misconduct_Policy_2021-22.pdf)). Penalties will be applied where a student is found guilty of academic misconduct, including termination of programme. * You are required to keep to the word/time limit set for an assessment and to note that you may be subject to penalty if you exceed that limit ([Agreed Penalties Policy](https://www.yorksj.ac.uk/media/content-assets/registry/policies/code-of-practice-for-assessment/30.Agreed_Penalties_Policy_2021-22.pdf)). You are required to provide an accurate word count on the cover sheet for each piece of work you submit. * For a first assessment attempt a penalty may be applied for late or non-submission of work by the published deadline or an approved extended deadline ([Agreed Penalties Policy](https://www.yorksj.ac.uk/media/content-assets/registry/policies/code-of-practice-for-assessment/30.Agreed_Penalties_Policy_2021-22.pdf)). * Where a re-assessment opportunity exists, late or non-submission of work receives a mark of zero and is not eligible for a capped mark ([Agreed Penalties Policy](https://www.yorksj.ac.uk/media/content-assets/registry/policies/code-of-practice-for-assessment/30.Agreed_Penalties_Policy_2021-22.pdf) and [Reassessment](https://www.yorksj.ac.uk/students/exams-and-assessment/reassessment/)) * An extension to the published deadline may be granted to an individual student if they meet the eligibility criteria of the [Exceptional Circumstances policy](https://www.yorksj.ac.uk/media/content-assets/registry/policies/code-of-practice-for-assessment/16.Exceptional_Circumstances_Policy_2021-22.pdf). | | | | | |
| Note | | | | | |
| [Feedback Policy:](https://www.yorksj.ac.uk/media/content-assets/registry/policies/code-of-practice-for-assessment/31.Feedback_Policy_2021-22.pdf) Marks are to be returned to students with the caveat that all marks are provisional until final approval by the School Assessment Board (SAB). Confirmed marks will be made available via e:Vision after the SAB meeting. | | | | | |

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| **Assessment Component [and weighting]** | **Descriptors By Grade** | | | | | | |
| **Application - Coding [20%]** | [85%+] Application works fully. Code well structured anc commented. Variables, Objects, Classes, Methods all well named. | [70-84%] Application works with minor faults. Code well structured and commented. Naming good. | [60-69%] Application mostly works. Code structure and commenting reasonable. Naming reasonable. | [50-59%] Application Some features missing. Ok structure, comments, naming. | [40-49%] Bare bones implementation of application. | [20-39%]Application runs but fails to implement basic required features. | [0-19%] Application fails to do anything. |
| ***17points*** | ***14points*** | ***12points*** | ***10points*** | ***8points*** | ***4points*** | ***0points*** |
| **Application - Design Patterns [20%]** | Appropriate design patterns implemented well in a way that improves the application. Well commented. | Appropriate design patterns implemented well in a way that improves the application. | Appropriate design patterns implemented well.. | Design patterns implemented well but not the best choice. | Design patterns shoe horned in and/or implemented poorly. | Innappropriate design patterns implemented or appropriate design patterns failed implementation. | No design patterns |
| ***17points*** | ***14points*** | ***12points*** | ***10points*** | ***8points*** | ***4points*** | ***0points*** |
| **Project Document - Application Description [10%]** | Excellent, detailed and thorough description well written, illustrated and referenced (if appropriate). | Good detailed description, well written, illustrated and referenced (if appropriate). | Good description, missing a few details, Appropriately referenced, | Reasonably thorough description. | Description covers the basics and little more | Imcomplete description, or covers the basics and is poorly written. | Incomplete and poorly written |
|  | ***9points*** | ***7points*** | ***6points*** | ***5points*** | ***4points*** | ***2points*** | ***0points*** |
| **Project Document - Project Management [10%]** | Excellent, detailed and thorough description well written, illustrated and referenced (if appropriate). | Good detailed description, well written, illustrated and referenced (if appropriate). | Good description, missing a few details, Appropriately referenced, | Reasonably thorough description. | Description covers the basics and little more | Imcomplete description, or covers the basics and is poorly written. | Incomplete and poorly written |
|  | ***9points*** | ***7points*** | ***6points*** | ***5points*** | ***4points*** | ***2points*** | ***0points*** |
| **Project Document - Sprints [10%]** | Excellent, detailed and thorough description well written, illustrated and referenced (if appropriate). | Good detailed description, well written, illustrated and referenced (if appropriate). | Good description, missing a few details, Appropriately referenced, | Reasonably thorough description. | Description covers the basics and little more | Imcomplete description, or covers the basics and is poorly written. | Incomplete and poorly written |
|  | ***9points*** | ***7points*** | ***6points*** | ***5points*** | ***4points*** | ***2points*** | ***0points*** |
| **Project Document - Design Patterns [10%]** | Excellent, detailed and thorough description well written, illustrated and referenced (if appropriate). | Good detailed description, well written, illustrated and referenced (if appropriate). | Good description, missing a few details, Appropriately referenced, | Reasonably thorough description. | Description covers the basics and little more | Imcomplete description, or covers the basics and is poorly written. | Incomplete and poorly written |
|  | ***9points*** | ***7points*** | ***6points*** | ***5points*** | ***4points*** | ***2points*** | ***0points*** |
| **Reflective Report - Agile Process[10%]** | Excellent description and reflection on Agile processes | Very good description and reflection on Agile processes | Good description and reflection on Agile processes | Adequate description and reflection on Agile processes | Poor description and reflection on Agile processes | Very poor description and reflection on Agile processes | No description and reflection on Agile processes |
| ***9points*** | ***7points*** | ***6points*** | ***5points*** | ***4points*** | ***2points*** | ***0points*** |
| **Reflective Report - Adesign Patterns[10%]** | Excellent description and reflection on the design patterns used | Very good description and reflection on the design patterns used | Good description and reflection on the design patterns used | Adequate description and reflection on the design patterns used | Poor description and reflection on the design patterns used | Very poor description and reflection on the design patterns used | No description and reflection on the design patterns used |
| ***9points*** | ***7points*** | ***6points*** | ***5points*** | ***4points*** | ***2points*** | ***0points*** |