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**INTI International College Penang School of Computing**

**3+0 Bachelor of Science (Hons) in Computer Science, in collaboration with Coventry University, UK 3+0 Bachelor of Science (Hons) in Computing, in collaboration with Coventry University, UK**

# Coursework cover sheet

**Section A - To be completed by the student.**

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| Full Name: Julian Koh Chee Yong | |
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| Semester: Semester 3 | |
| Session:  **April 2023** | |
| Lecturer:  **Puteri Nursyawati Azzuri (puteri.azzuri@newinti.edu.my)** | |
| Module Code and Title:  **4067CEM Software Design** | |
| Assignment No. / Title:  **Continuous Assessment** | % of Module Mark:  **50** |
| Hand out Date:  **12 May 2023** | Due Date:  **Task 1: 02 June 2023, by 11.59pm.**  **Task 2: 07 July 2023, by 11.59pm**  **Task 3: 23 June 2023, by 11.59pm.**  **Task 4: 23 June 2023, by 11.59pm.**  **Task 5: 23 June 2023, by 11.59pm.** |
| Penalties: No late work will be accepted. If you are unable to submit coursework on time due  to extenuating circumstances, you may be eligible for an extension. Please consult the lecturer. | |
| Declaration: I/we the undersigned confirm that I/we have read and agree to abide by the University regulations on plagiarism and cheating and Faculty coursework policies and procedures. I/we confirm that this piece of work is my/our own. I/we consent to the appropriate storage of our work for plagiarism checking.  Signature(s): jk | |

# Section B - To be completed by the module leader

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| Intended learning outcomes assessed by this work:   1. Understand and apply appropriate concepts, tools, and techniques to each stage of the software development. 2. Understand and apply design patterns to software components in developing new software. 3. Demonstrate an understanding of project planning and working to agreed deadlines, along with professional, interpersonal skills and effective communication required for software production.   5. Demonstrate an awareness of, and ability to apply, social, professional, legal, and ethical standards as documented in relevant laws and professional codes of conduct such as that of  the Malaysian National Computer Confederation. | | |
| Marking scheme | Max | Mark |
| 1. User Story Mapping | 20 |  |
| 2. Setting up a GitHub |  |
| Repository | 10 |
| 3. Creating a Class diagram and |  |
| design pattern selection | 30 |
| 4. Creating a Prototype User |  |
| Interface and Usability Testing | 20 |
| 5. Discuss the ethical issue |  |
| related to the software | 20 |
| Total | 100 |  |

# Task 5

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# Ethical issues related to the software

  In the modern era, student business applications are beneficial platforms to students because they give students an opportunity to learn digital and entrepreneurial skills, also earning side income by offering products or services to customers and receiving payment for it. However, this comes with significant concerns related to the software like its privacy, intellectual property rights and its effects on society. This analysis report explains the measures that were taken to protect user privacy, protect intellectual property and elaborates the application's effects on society.

  One of the measures taken to protect the privacy of the users is having robust security by encrypting all sensitive user data like their login credentials, payment details, and personal information, a secure communication protocol Transport Layer Security (TLS) is used to provide communication security. All of this is to ensure that their data is protected from hackers and any unauthorised access. Besides that, there are regular security audits and updates to make sure it is up to date to new kinds of attacks. Users also have control of their personal information by having options to delete or restrict access to their data in the application. A privacy policy and consent agreement are also shown to the users during registration that explains what data is collected from them and how it is used. By respecting user privacy, the application builds trust from its users and makes it a safe environment for users to conduct their business activities.

  Intellectual property rights also play an important role in the application, they protect the work of its original owners and the work of the students in the application. Upholding intellectual property rights leads to an ethical environment and encourages innovation and creativity. One of the measures taken to address intellectual property rights is the implementation of a monitoring and reporting system. A monitoring system is implemented to detect and address any violations of intellectual property rights in the student business application. There will also be a reporting system for users to report any misuse of intellectual property. Users under the violation will have to quickly respond by taking appropriate actions after receiving a warning to resolve the violation. Besides that, there will be information about copyright and compliance in the educational resources area in the application so that they can educate themselves about copyright laws and the importance of following intellectual property rights, they will also be reminded of intellectual property rights regulations when they are adding any third-party content.

  The effects of this student business application on society are quite beneficial, one of the benefits being the increase of entrepreneurs. Entrepreneurs are beneficial to society because they have the potential to provide job opportunities and help the market by increasing competition. Increased competition causes the market to have competitive pricing and value that will benefit the consumers. This application provides a platform for students to develop business skills and gain experience that will help them pursue their entrepreneurial goals in the future. It also creates an opportunity for students to generate side income that could lower the financial burden of their parents and give them a head start when they start their adult life. Furthermore, this application encourages innovation and creativity for the students, they will have to be innovative and creative to develop unique products that could solve a unique problem and explore new business ideas, this benefits society by bringing new ideas to the market.

 In conclusion, the software design of a student business application and its implementations require a lot of consideration towards protection of its user data, intellectual property rights and its effects on society. That way, the application can reduce any drawbacks for its users and itself. It is also important to pay attention to things such as fair competition, customer rights, and that the app is not used for negative purposes, all of this to maintain a safe and ethical student business application.