**INTI International College Penang School of Engineering and Technology**

**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: TEH GER MIN | |
| CU Student ID Number: 12672763 | |
| Semester: 3 | |
| Session:  **April 2022** | |
| Lecturer:  **Nadhrah Abdul Hadi (nadhrah.abdulhadi@newinti.edu.my)** | |
| Module Code and Title:  **4067CEM Software Design** | |
| Assignment No. / Title:  **Continuous Assessment** | % of Module Mark:  **50** |
| Hand out Date:  **22nd April 2022** | Due Date:  **Task 5: 17 June 2022, 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 appropriate storage of our work for plagiarism checking.  Signature(s): TEH | |

**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 2. Setting up a GitHub Repository 3. Creating a Class diagram and design pattern selection 4. Creating a Prototype User Interface and Usability Testing 5. Discuss the ethical issue related to the software | 20  10  30  20  20 |  |
| Total | 100 |  |

**Task 5 - The ethical issue related to the software**

**Ethnical Issue**

The software has become a frequent and necessary instrument in human lives in this age of advanced technology. During the software development process, however, the consequences of software on humans, whether beneficial or negative, have gotten less attention. In this report, we will focus on software ethics in terms of privacy, truth, accessibility, impact on quality of life, and so on. Our government has established many laws aimed at avoiding ethical issues in software aimed at protecting software users' safety and thwarting criminal teams' ulterior motivations.

Both developed and developing countries have expressed interest in adopting the information technology environment. However, protecting this electronic environment from attack remains a major challenge. "Hacking" is a particularly widespread type of computer crime. Computer hacking has become a serious threat, necessitating even more legislation to make computer hacking and sabotage illegal. Malaysia became one of the countries with computer-specific legislation after enacting the Computer Crime Act (CCA) in 1997. The Computer Crime Act 1997 (CCA 1997) was recognised by the Malaysian Legislative Body in 1997, and it went into effect in June 2000. The goal of CCA 1997 is to cover crimes involving computer abuse, such as hacking, cracking, and phishing. As a solution to emerging possibilities of computer crime, CCA 1997 was modelled after the UK Computer Misuse Act 1990. Several approaches or tools, such as the Demilitarized Zone (DMZ), Anti-distributed denial-of-service (Anti-DDoS), authentication, and encryption will be implemented in this website I planned to prevent and fight cybercriminal attacks.

First, a Demilitarized Zone (DMZ) is a zone between two firewalls that serves as a buffer between the public internet and private networks. In addition, the Anti-Distributed Denial-of-Service (Anti-DDoS) is a tool to prevent malicious attempts to disrupt regular traffic to a web property and ensure the stability of the website. Furthermore, authentication is a process that recognised the identity of the user. On this website, when the user forgot their password, they need to choose the correct security question and input the correct answer to the question for resetting their new password. Moreover, encryption is a way of converting data into a secret code to conceal the real meaning and information.

Human life is inextricably linked to technology items in today's quickly evolving society, resulting in the ongoing accumulation of vast amounts of data. Data helps people to make smarter choices and receive better services in a variety of areas, including healthcare, commerce, e-commerce, education, social networking sites, etc. However, this large amount of data is personal in nature. To win consumers' trust in how their private information is shared with the organisation, all sensitive information should be secured. Data privacy and security have gotten a lot of attention in recent years, and the key difficulty currently is figuring out how to cope with diverse data dangers using privacy threats and privacy protection technologies. The Communications and Multimedia Commission (MCMC) formed the Personal Data Protection Department (PDPD) on 16 May 2011. This department's primary mission is to supervise the processing of personal data of persons participating in business transactions to ensure that data is not mishandled or exploited by third parties. Users must be secured under the PDPA from any misuse of personal data stored or processed by individuals, public and private sectors in Malaysia for business activities.

PDPA revolves seven fundamental principles which are General Principle, Notice and Choice Principle, Disclosure Principle, Security Principle, Retention Principle, Data Integrity Principle, and Access Principle. General Principle is a requirement for the organization to get consent to use and process your personal data. Besides that, the Notice and Choice Principle requires an organisation to present you with a written notice describing the type of personal information collected, the purpose, and the recipients of your data. Apart from this, Disclosure Principle is a requirement that the organization will not disclose your personal data to any third party without your consent. Besides, the requirement of the Security Principle is that the organisation take realistic means to secure personal data against loss, abuse, modification, unauthorised or accidental access or disclosure, mutation, or destruction. Beyond that, Retention Principle is a requirement that the organization will not keep personal data longer than is necessary and will take all reasonable steps to ensure that all personal data is completely removed and permanently removed if personal data is no longer needed. Otherwise, Data Integrity Principle states that an entity must take reasonable steps to guarantee that personal data is accurate, complete, non-misleading, and updated. Lastly, Access Principle is a requirement that the organization gives you access to your personal data and you right to correct your personal data if it is inaccurate, incomplete, misleading, or not up to date.

According to the PDPA Act, when a user registers to join an event or activity, on that page the user will see and must agree to the terms and conditions (T&C) of the event meanwhile fulfilling the principles of notice and choice. The terms and conditions (T&C) include some principles of PDPA, such as the general principle, security principle, and data integrity principle.