Task 5 – Discuss the ethical issue related to the software

**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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| CU Student ID Number: 12673140 | |
| Semester: 2 | |
| 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 1: 13 May 2022, by 11.59pm**  **Task 2: 1 July 2022, by 11.59pm**  **Task 3: 17 June 2022, by 11.59pm.**  **Task 4: 17 June 2022, by 11.59pm.**  **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): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |

**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 |  |

**Privacy concerns**

In current time, school administrations face a range of problems from day to day, from school governance, the handing of school system, service education, and also the support of overwhelmed teachers. However, majority of university/college now such as INTI College Penang, Multimedia College and etc don’t have a proper event management system for students so it’s difficult for students to book events. Club admin will face great difficulty such as they require time and effort to obtain/add events information from students & provide on paperwork by handwritten. Certain students/ clubs will also show certain of having their personal information to be exposed to 3rd party or college administration. It can provide a good challenge for school to implement an event system for all students to book/manage content of events. To prevent personal information from being exposed, we refer to Personal Data Protection Act.

The PDPA was introduced to highlight consumer confidence in business transactions and e-commerce, given the increasing number of credit card and identify theft frauds as well as personal data selling without the user’s consent. Before PDPA 2010 was introduced, data protection obligations were existing among specific sectoral secrecy and confidentiality obligations only – personal information was protected only as ‘confidential information’ through civil actions or contractual obligations in regards to breach of confidence.

**Security Principle**

According to section 9(1) (b) & (c) of PDPA 2010, the data user shall, when processing personal data, take practical steps to secure the personal data from any loss, misuse, modification, unauthorized or accidental access or disclosure, alteration or destruction by having regard of location of stowed data and security measures incorporated into any equipment in which personal data is stored. Such as the use of 3rd party like Google or Facebook implemented in the software registration will store/keep personal data of user in their database unless requested/accessed by user/admin. For example, Google will request two-step verification or safe browsing feature from user to activate when access the website as it helps to keep their personal data from exposed to unauthorised access like hackers. If found unauthorised access in software, Google will prevent the access and implement a security protocol to solve the issue.

**Data Integrity Principle**

According to section 11 of PDPA 2010, data user has to take rational steps to ensure that the personal data is accurate, complete, not deceptive and kept-up-to-date, having regard to the purpose (and any directly related purpose) for which it was collected and processed. Such as the user must enter their information correctly in the system based on event details, booking information, profile and payment details so can prevent confusion and misunderstanding. This is because the information will be display in the system event & booking interface and it will also be sent directly to user through email or notification of the information.

**Retention Principle**

According to section 10(1) & (2) of PDPA 2010, personal data is not to be retained longer than is necessary for the fulfilment of the purpose for which it is processed. A duty is also imposed on the data user to take reasonable steps to ensure that all personal data is destroyed or permanently deleted if it is no longer required for the purpose for which it was processed. Such as information in the software under the feature (profile, login, booking info & payment invoice) will retain by user unless user delete/change the details in the software. This will cause the old data to be deleted & overwrite with information of new data in the system software.

**Intellectual Property Rights**

According to section 13A(a) of Copyright Act 1988, It shall not be an infringement of any copyright in a design document or model(software) recording or exemplifying a design for anything other than an artistic work or a typeface in terms to make an article to the design, or to copy or to replicate an article made to the design. Based on section 17(2), it shall be known that where a literary work which is software development had not been distributed before the death of the author, copyright which subsists in such work under this Act shall continue to exist until the expiry of a period of fifty years computed from the beginning of the calendar year next following the year in which the work was first published. Under the implementation of rights of copyright owner in the software, the Author, copyright owner and performer are given an exclusive right to control under the copyright law. Legal rights that are given to them comprises the rights to enforce their copyrighted works in cases for infringement either by civil or criminal action. This also implies that no person may, without the consent of the author, or, after the author’s death, of his personal representative, do or approve the doing of any of the following acts:

a) the presentation of the work, by any means whatsoever, without recognizing the author or under a name other than that of the author; and

(b) the distortion, mutilation or other change of the work if the distortion, disfigurement or modification will significantly alter the original work and adversely affect the author’s honour or reputation.

Under the implementation of trademarks in the system which can be protected through registration, although unregistered trademarks also attract rights. A trade mark means any sign capable of being represented graphically, which is capable of distinguishing goods or services of one undertaking from those of other undertakings. Based on the software, we consider of using INTI logo & event images from internet as trademark to implement in software. This shows that the use of INTI logo identify software as the originator and can be used under INTI college for students to book events. This also tells that if software owners happen to own a trademark, the owner can provide proof of this ownership and thus evidence that trademark rights have been violated.

**Effects to Society**

Software shows a major role in communications in current society, as well as in other services such as gas, electricity and water. All motorised transport/services as well as various government organisations such as banks, Social Security and hospitals rely on software to operate. Should software fail such elements of society would be severely restricted. Based on software, events act as catalysts for clubs in college and communities by refining local residents’ self-image of the community in which they live and for making a positive contribution to their quality of life. Event organisers, public authorities or event sponsors can inspire interest and goodwill in the build-up to an event through a programme of public events and media engagements. Examples include trophy tours, torch relays and cultural festivals alongside sporting events.

For different types of events, the software is design to provide programmes of “outreach” event activity to event organisers and public authorities as well as inspire changes in behaviour of target groups to generate long-term health benefits. These are often “taster” sessions to encourage long lasting involvement in sport or arts among young people or segments of the population that are historically less involved (e.g. socially disadvantaged). The software programmes can be targeted to college students, local residents, whole nations or specific international communities.

**Ethics**

Based on the software, we implies a few principles based on MNCC Code of Conduct which is Confidentiality, Integrity and Responsibilities into the software. To avoid confusion, “ethics”, as understood here, addresses any intentional moral action that impacts negatively or positively the lives and values of others.

**Confidentiality**

Confidentiality is a principle which covers the need to protect confidential data from exposed to third party like parents, company and etc. To take into consideration, when using the software INTI college will provide a privacy protocol to all staffs as to prevent any personal information of students when booking any events to any third party intentionally or inadvertently. This protocol only applies under INTI college/club administration.

**Integrity**

Integrity means the quality of actuality honest and fair,” “the state of being whole and complete,” “adherence to moral and ethical norms,” etc. This implies that the owner of the software should obtain additional guidance or expertise provided based on trust and good faith from qualified advisers like software developer when developing the content of the software. For example, lecturer from INTI inform the owner that content of the software requires further reassessed or improvement to be used by college during certain time. This shows any information regarding the software must be keep up-to date on relevant development.

**Responsibility**

Responsibility means the state or fact of partaking a duty to deal with something or of having control over someone. The owner of the software should take full responsibility of each contents in the software in such that the work must be completed in time manner and within budget. If owner cannot achieve what information that was promised, the owner must alert the client or employer like INTI College at the earliest possible time so that corrective action can be taken. For example any personal information relate to booking details from students must be informed directly to INTI college to prevent any situation which may harm or seriously affect a third party.