**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.**

|  |  |
| --- | --- |
| Full Name: TAN KHOON KHYE | |
| CU Student ID Number: 14008809 | |
| Semester: 2 | |
| 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: 07 July 2023, by 11.59pm.**  **Task 4: 07 July 2023, by 11.59pm.**  **Task 5: 07 July 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.  A picture containing black, darkness  Description automatically generated  Signature(s): | |

**Section B - To be completed by the module leader**

|  |  |  |
| --- | --- | --- |
| Intended learning outcomes assessed by this work:  Understand and apply appropriate concepts, tools, and techniques to each stage of the software development.  Understand and apply design patterns to software components in developing new software.  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 |  |

**Title: College Student Business System**

**Task 5: Discuss the Ethical Issue Related to the Software**

**5.1 Introduction**

A student business system poses an array of ethical problems that requires some investigation done. First, there are privacy issues because the system gathers and store students’ personal information like their financial and academic records. Secondly, the system can promote the development and sharing of intellectual property, such as original products sold, which would present concerns regarding the ownership and crediting and exploitation of other student sellers’ work. Lastly, the usage of such a system may have societal ramifications that could affect students’ autonomy such as a more intrusive surveillance and data profiling.

**5.2 Privacy Concerns**

When making a student business system in Malaysia, several privacy concerns come to mind. These concerns come from various aspects that may violate the Personal Data Protection Act 2010 (PDPA) which helps to regulate the use of personal information in commercial transactions and Computer Crimes Act 1997 which protects against exploitation of computer systems and activities.

Firstly the protection of one’s data is top priority. The system encounters the dangers of unauthorized access to personal data. Identity theft may also occur as a business system tends to include information like student id, contacts information and financial information.

Secondly the consent to collect and process students’ personal data. The system must explicitly make aware of the students’ rights to withdraw their consent at any time. Furthermore, the consent must be sought for each specific data requested by the system.

Thirdly the Personal Data Protection Act 2010 stipulates that companies or organizations must ensure that any third parties that correspond and share the data of a business system with must provide an equivalent degree of data protection. Written contracts must be put in place to oversee data sharing and certify the PDPA compliance. (Tanya Saraswat, 2022)

Lastly, personal information of students must not be maintained for longer than is required to achieve the goals for which it was obtained. The student business system should have proper data disposal and retention guidelines and procedures for safe data deletion after a period of time.

**5.3 Intellectual Property Rights**

In Malaysia there are a few intellectual property rights that are protected under several cyberlaws that must be observed by the student business system.

Firstly, copyright laws may safeguard the student business system’s software and design. For example, the Copyright Act 1987 provides protection to owners of original works. Thus, unauthorized distribution and copying of the source code, UI and other unique components of the system are shielded. Additionally, the Patents Act of 1983 allow eligible software related inventions that satisfy the requirements of originality and industrial practicality may be patented. [Pauline Khor, 2022]

Secondly, the student business system can include sensitive data that offers itself a competitive edge against other potential rival systems in campus. Therefore, NDAs with any parties that are involved in the development cycle will be put into place to protect the confidentiality of such information.

Lastly under the Trade Marks Act 2019, names or logos used under the student business system may be trademarked. Hence granting the owner of the mark the only legal right to use it and prevents the usage of other similar yet confusing marks by third parties. [Audrey Yap, Wong Dan Yi 2021]

**5.4 Impacts on Society**

A student business system may have a range of societal effects, both good and bad.

First the good, such a system empowers young entrepreneurs. A student business system have the potential to inspire students to venture out their ideas and talents. The system can promote a culture of creativity and independent thinking among the student population by giving them aa platform to display their goods or services.

Another benefit is that the system can push for a more socially and ethically responsible business community. It will drive students to include long term viability, moral sourcing and charitable impact into their business practices to foster an entrepreneurial ecosystem that is more socially conscious.

However there too are drawbacks of said system in society, there are as many positive as there are negatives too.

The first potential negative impact on society is an increased stress and pressure among students. Juggling between running a business and being responsible academically can put a toll on their overall mental health and wellbeing. Moreover, an overtly cutthroat studying environment can be harmful to students’ personal development can stem from their need to constantly overtake their peers.

Lastly students that have a business of their own on the system may neglect their involvement in sport or arts activities. These activities play a vital role to a student’s development as they encourage and teach skills like innovation, leadership, and accountability. Students that are too caught up in a business may pass up these golden opportunities.

**5.5 Conclusion**

In conclusion an analysis of a student business system in Malaysia brings up a couple of possible issues regarding privacy, intellectual property rights and society. The system may be vulnerable to a data leak as it heavily depends on students’ personal data to work. The storage of such a huge amount and private data raises privacy issues. Furthermore, it is crucial to protect the original works of students displayed on the system itself along with the system’s source code and trademarks. This calls for a robust intellectual property rights protection. Finally, despite the student business system can incentivise an early interest in ethical entrepreneurship, the system’s impact on them may be detrimental in the long run which must be thoroughly tracked to prevent aggravating disparities.

**REFERENCES**

Tanya Saraswat. *Personal Data Protection in Malaysia | PDPA in Malaysia*. (n.d.). Personal Data Protection in Malaysia | PDPA in Malaysia. (10 December 2022) Available at: <https://www.khuranaandkhurana.com/2022/12/10/protection-of-personal-data-in-malaysia/> [Accessed: 6 July 2023]

Pauline Khor. *Malaysia Amends Copyright Act and Patents Act.* (27 January 2022). Available at: <https://www.allenandgledhill.com/sg/publication/articles/20102/amends-copyright-act-and-patents-act> [Accessed at: 6 July 2023]

Audrey Yap, Wong Dan Yi*. 10 Highlights Of The Malaysia Trademarks Act 2019 - Trademark - Malaysia*. (25 November 2021). Available at: <https://www.mondaq.com/trademark/1135234/10-highlights-of-the-malaysia-trademarks-act-2019> [Accessed: 6 July2023]