


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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Semester: 1	
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): 	

Section B - To be completed by the module leader

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 – Discuss the ethical issue related to the software (20 marks)

Discuss and do a critical analysis of your software in these areas, privacy concerns, intellectual property rights, and effects on society.

Output – A report in Word format, uploaded to GitHub.

Due – **Week 12 of the semester. 23 June 2023, by 11.59 pm.**

Introduction

A student business system for college refers to a platform or application that facilitates student entrepreneurship within the college environment. It may provide resources, tools, and networking opportunities for students to start and run their own businesses while pursuing their academic studies. Such a system can have various aspects related to privacy concerns, intellectual property rights, and effects on society.

Privacy Concerns

Privacy concerns are crucial when implementing a student business system for college. Since the system will likely involve personal information, financial data, and potentially sensitive business ideas, ensuring robust privacy measures is essential. Some key aspects to consider are:

Data Protection: The system must implement strong data protection practices, including encryption, secure access controls, and regular data audits. Any data collected should be stored and processed with the utmost care to prevent unauthorized access or data breaches.

Consent and Transparency: Students should be fully informed about the data being collected, its purpose, and who will have access to it. Obtaining explicit consent from students for data usage is necessary to comply with privacy regulations.

Anonymization: Where possible, personal data should be anonymized or pseudonymized to protect individual identities, particularly when sharing data for research or analytical purposes.

Data Retention: The system should have clear policies on data retention, ensuring that data is only kept for as long as necessary and is securely deleted when no longer needed.

Third-party Integration: If the system integrates with third-party services, ensuring that these providers also adhere to strong privacy practices is essential to maintain data security.

Implementing a student business system involves collecting and storing personal information about students, including their academic records, contact details, and financial information. Privacy concerns arise when there is inadequate protection of this sensitive data. It is crucial to ensure that appropriate security measures, such as encryption and access controls, are in place to safeguard the privacy of students' information.

Furthermore, colleges should be transparent with students about the data they collect, how it will be used, and with whom it may be shared. Students should have control over their own data and the ability to opt-out or restrict the sharing of their information if they wish. By addressing these privacy concerns, colleges can build trust and maintain the confidence of their student population.

Intellectual Property Rights

The student business system should address intellectual property (IP) rights to protect the creative and innovative efforts of student entrepreneurs. Key considerations include:

Ownership: The system should clarify the ownership of any IP generated through its use. Students must know whether they retain ownership of their ideas or if the college may have some claim over them due to the system's involvement.

Licensing and Usage: If the system utilizes students' IP for certain purposes (e.g., marketing, analytics), it should be explicitly outlined in terms of licensing and usage rights.

Protection Mechanisms: The system can educate students on how to protect their IP through patents, copyrights, trademarks, or trade secrets. It may also provide resources or connections to legal experts who can assist with IP protection.

Fair Competition: The system should encourage fair competition among student entrepreneurs and ensure that no one's IP is exploited or misused by others using the platform.

Collaborative Projects: In student business systems, collaborative projects among students are encouraged. However, determining ownership and IP rights in such projects can be complex. Adequate legal frameworks and agreements should be in place to define the ownership of joint ventures and ensure fair distribution of IP rights among collaborating students.

When students engage in entrepreneurial activities through a college business system, issues related to intellectual property (IP) rights may arise. It is crucial to establish clear policies and guidelines to address ownership of intellectual property developed by students within the system.

Colleges should consider whether the IP rights should be retained by the students, shared between the students and the college, or solely owned by the college. Balancing the interests of students' creative work and the college's contribution and support is essential. A fair and transparent IP policy should be developed to protect the rights of all parties involved. This policy should outline ownership, licensing, and commercialization procedures, ensuring that students are adequately acknowledged and rewarded for their innovations.

Effects on Society

The introduction of a student business system can have several effects on society, both positive and negative:

Positive Effects

Fostering Entrepreneurship: The system can inspire and support students in pursuing their entrepreneurial aspirations, leading to a more vibrant and innovative society.

Economic Growth: Successful student startups may contribute to the local economy, creating jobs and stimulating economic growth. Student entrepreneurship can contribute to local economic growth by creating jobs, fostering innovation, and generating revenue. These ventures can have a positive impact on the local community and economy by driving innovation and attracting investments.

Skill Development: The system can provide practical experience and skill development opportunities, preparing students for the real-world business environment. Engaging in entrepreneurial activities through a student business system can provide valuable real-world experiences and skill development opportunities. Students can develop critical skills such as problem-solving, communication, leadership, and project management, which are transferable to various professional settings.

Negative Effects

Academic Distraction: If not managed properly, the pursuit of business ventures might distract students from their academic responsibilities.

Wealth Inequality: Successful student startups might lead to significant wealth accumulation for a few, exacerbating wealth inequality within the student body and society at large.

Ethical Considerations: If the system promotes businesses without considering their societal impact, it may inadvertently support ventures that exploit labor, damage the environment, or engage in unethical practices.

Student business systems can have both positive and negative effects on society. On the positive side, these systems can contribute to economic growth by nurturing young entrepreneurs, fostering innovation, and generating job opportunities. They can also encourage collaboration between students, faculties, and industry professionals, leading to knowledge exchange and potential breakthroughs.

However, it is crucial to consider potential negative effects as well. Student business systems should not exacerbate existing social inequalities or create unfair advantages for certain students. Institutions need to ensure equal access and opportunities for all students, regardless of their backgrounds or resources.

Additionally, there should be a balance between academic pursuits and entrepreneurial activities. The system should not unduly distract students from their core educational responsibilities or hinder their academic progress.

To mitigate the negative effects and maximize the positive impact on society, colleges should carefully design and monitor student business systems, provide appropriate support and resources, and foster an inclusive and supportive environment for all students.

Recommendations

Based on the critical analysis conducted, several recommendations can be made to address the concerns surrounding student business systems. Firstly, colleges should prioritize the implementation of robust privacy measures, including data encryption, secure servers, and informed consent procedures. Regular security audits should be conducted to identify vulnerabilities and rectify them promptly. Secondly, a comprehensive policy framework that addresses intellectual property rights, licensing agreements, and dispute resolution mechanisms should be developed. Clear guidelines on ownership, transfer, and protection of IP should be established to promote fairness and innovation. Lastly, colleges should strike a balance between supporting entrepreneurial ventures and ensuring a well-rounded education by providing resources and support systems for both academic and entrepreneurial pursuits.

Conclusion

In conclusion, student business systems offer exciting opportunities for college students to explore entrepreneurship within an educational setting. However, the implementation of these systems requires careful consideration of privacy concerns, intellectual property rights, and the effects on society. By addressing these issues proactively and implementing the recommended measures, colleges can create an environment that fosters innovation, protects students' rights, and contributes positively to society. A holistic approach that ensures privacy, fairness, and inclusivity will help strike a balance between academic and entrepreneurial pursuits, ultimately benefiting the entire college community and society at large.

Marking Rubric for Continuous Assessment

	Marks Below 40%	Marks in the range 40 – 49%	Marks in the range 50 – 59%	Marks in the range 60 – 69%	Marks 70% and above
User Story Mapping (20 marks)	User Story Mapping not done or User Story copied/does not match the exact system.	User Story Mapping done at a minimum level and does not capture the important activities of the system.	User Story Mapping done and does capture several important activities of the system. The breakdown of the user story mapping can be improved.	User Story Mapping done and does capture several important activities of the system. The breakdown of the user story mapping is good and uses software that can assist that process (For example Trello compared to Ms. Word).	User Story Mapping done and does capture most important activities of the system. The breakdown of the user story mapping is excellent and uses software that can assist that process (For example Trello compared to Ms. Word).
Setting up a GitHub Repository (10 marks)	GitHub repository does not exist or cannot be accessed or the required files are not available at the time of access.	GitHub repository exist and some of the required files are not available at the time of access.	GitHub repository exist and most of the required files are available at the time of access. However the dates does not follow the required deadline.	GitHub repository exist and all of the required files are available at the time of access. However the dates for some files does not follow the required deadline.	GitHub repository exist and all of the required files are available at the time of access. The dates on the files follows the required deadline.
Creating a Class diagram and design pattern selection (30 marks)	The Class diagram does not represent the required solution (contains generic or non-related classes such as admin), the design pattern suggested is not suitable for the given problem.	The Class diagram and design pattern represent the required solution but in a very general and incomplete way. Required classes in the design are not declared.	The Class diagram and design pattern represent the required solution in a partial way. A few required classes in the design are not declared.	The Class diagram and design pattern represent the required solution in a satisfactory way. Most required classes are declared.	The Class diagram and design pattern represent the required solution in an excellent way. All required classes are declared.

Creating a Prototype User Interface and Usability Testing (20 marks)	No prototype were available or the measurement for the usability testing is not clear.	The prototype cover minimalist and trivial design (such as login) and the measurements for the usability testing are not clear.	The prototype cover adequate design and several measurements for the usability testing are not clear.	The prototype cover good design and most measurements for the usability testing are clear.	The prototype cover excellent design and all measurements for the usability testing are clear.
Discuss the ethical issue related to the software (20 marks)	There is no discussion on the ethical issue or only the theories are pasted back for this component.	There is an attempt to discuss on the ethical issue but no critical analysis was done	There is an attempt to discuss on the ethical issue with some critical analysis was done	There is an attempt to discuss on the ethical issue with good critical analysis.	There is an attempt to discuss on the ethical issue with excellent critical analysis.