Your response

Respondent: **MENIKE W.R.G. .** Submitted on: Sunday, 9 October 2022, 8:45 PM

Part 1

The following questions should be based on your second-year or third-year group project.

1   **Briefly describe your third or second-year group project and answer the following questions based on the project.**

For the third year group project, we developed a Secure Content Delivery Platform, mainly focusing on the Course Content Creators. The project is called Lumen. The platform is quite similar to a Moodle open sourced learning platform. The specialty of our product is the extensive security of the content.

Lumen has integrated DRM technologies (Digital Rights Management technologies) to secure the content uploaded to the web application by the creator. The course content creators can choose what kind of security features they want for each of their content and depending on that the following security features are added.

For Videos

Not downloadable
Encrypted
Block screen capturing

PDFs

Water Marking
Not downloadable
Block screen capturing

Metadata

Block copying

Our goal was to offer the course content creators a familiar platform with enhanced security so that they could protect the exclusivity of their ownership of the content and, through that, secure their revenue.

2 *   **Identify every stakeholder involved.**

- Organizations / Institutes
- Individual Teachers
- Course Moderators
- Students
- Widevine
- Microsoft – PlayReady
- Apple – Fair Play
- Cloudflare
- Banks

3 *   **Does your project improve human well-being? If so, explain how your project enhances the well-being of some affected parties.**

The product provides extreme security for content creators. Because of this, content creators are motivated to create more content, hence expanding the e-learning ecosystem. And because of our business model, even the smallest content creators are able to generate considerable revenue with their exclusive content. This leads to the availability of more content, (especially educational content) for people to learn. There are more things to enjoy. This helps create a more educated society.

4 *   **Does your project promote fundamental human rights or support the right to autonomy? If yes, briefly explain**

Article 17 of the 1948 Universal Declaration of Human Rights states, "Everyone has the right to own property alone as well as in association with others. No one shall be arbitrarily deprived of his property." The property includes intellectual property as well as digital content. Lumen offers anyone a way of securing their digital property.

5 * **Is there any conflict of interest among the identified stakeholders, if so what?**

Students would like to get the materials for free and keep some materials for later use. However, the content owners would like to keep the content exclusive and secure, with security restrictions. A conflict occurs because of it.

6 * **How do you propose to solve the identified conflicting interest among the stakeholders?**

- Reducing the fees for educational material.
- Letting organizations pay a price and let the students of that organization enroll in courses free of charge

7 * **What are the possible negative consequences of your project?**

Students are restricted from accessing the materials for free. In most educational societies, pirated or unlawfully acquired educational content is accepted from an ethical point of view.

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Ex: SciHub is a shadow library that archives millions of
research papers, journal articles, etc.
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It is hard for students with financial hardships to access information and knowledge.

8 * **How are you going to mitigate or minimize the identified negative consequences?**

Allowing the organizations to pay a fee and let their students access the courses for free and setting a low cost as the enrolment fee.

9 * **Apply act-utilitarianism and justify investing effort and time in your project**

Act Utilitarianism is based on the consequences that provide greater happiness for the people that are affected by an act. We'll analyze the positives and negatives of Lumen under Act Utilitarianism.

Positives

- Content creators can securely store content.
- They can control who can have access to content.
- They can generate revenue.
- Students have equal grounds on exams.
- Increased studying because there is less ground for cheating in assignments and exams.
- Teachers can view and analyze exam results and give attention to students that are falling behind so students will have more chances to thrive educationally.
- More and more content is being created.
- Anyone anywhere can access a course with a little payment.

Negatives

- Access to information and knowledge is restricted.

- Students with financial hardships will have a hard time accessing educational materials.
- Students can't save materials for later use.

For the stakeholders involved, there are more positives than negatives. Further, as discussed earlier, Lumen advocates fundamental property rights. Therefore, under Act Utilitarianism, investing effort and time in this project is justified.

10 * **How would the users of your system misuse the system?**

There is no authority or someone in control of what type of material is being uploaded into the system. Therefore, there can be harmful, inappropriate content or misinformation being shared in a course among its users.