Date : 13/3/2023

Work Done : We are currently in the second phase of the spiral model SDLC. In this phase we are supposed to propose the best probable solutions for the risks, that we have determined in the first phase of our lifecycle during risks determination.We have also started working on basic implementation of the project which is the homepage and authentication.

Work for next week: We will progress toward the 3rd phase of the lifecycle (i.e Implementation and design phase).In this phase, we are supposed to develop a rough prototype of our project in order to get the customer feedback in the 4th phase.

Risk Management: Most Probable Solutions

User Registration and Login:

1. **Password Complexity:** Strong password policies should be enforced that mandate a minimum length, mix of characters, and regular password updates. Additionally, password strength meters can be used to help users create stronger passwords.

2. **Multi-factor Authentication:** Multi-factor authentication (MFA) can be used to add an extra layer of security to user login. This requires users to provide an additional form of identification, such as a one-time password or biometric verification.

3. **Session Management:** Session management can help prevent unauthorized access by setting session timeouts and using secure cookies to manage user sessions.

Course and lesson management:

1. **Obtain permission or licenses:** If you need to use copyrighted material in your course or lesson, obtain permission from the copyright holder or obtain a license to use the content. This may involve paying a fee or meeting certain conditions.

2. **Monitor for infringement:** Regularly monitor for potential copyright infringement by using tools such as plagiarism checkers or by reviewing user-generated content.

3. **Have a response plan:** In the event of a copyright infringement claim, have a response plan in place that outlines steps to take, such as removing the infringing content or obtaining legal advice.

Student Progress Tracking:

1. **Establish data security protocols:** Establish protocols for data security, such as using secure servers, encrypted transmissions, and role-based access controls to ensure that student progress data is secure and confidential.

2. **Implement system redundancies:** Implement system redundancies to ensure that student progress data is not lost in the event of a system failure, such as regular data backups and redundant servers.

3. **Ensure data accuracy:** Ensure data accuracy by regularly validating and verifying student progress data, such as cross-checking data with other sources or using automated data validation tools.

4. **Monitor for errors and issues:** Regularly monitor for errors or issues with student progress tracking data, such as inconsistencies or anomalies, and take appropriate actions to correct them

Online quizzes and assessments

1. **Use Proctoring Tools:** To prevent cheating, online quizzes and assessments can be proctored using tools such as video monitoring, screen recording, and keystroke analysis.

2. **Create Unique Assessments:** To discourage cheating, assessments can be designed to be unique to each student, incorporating randomized questions and answer choi**ces.**

3. **Provide Technical Support:** To address technical issues that may arise during online quizzes and assessments, students should have access to technical support or troubleshooting resources.

Video and multimedia content delivery

1. **Content filtering:** Implement content filtering technologies to scan videos and multimedia content for harmful or inappropriate content. This will help prevent the distribution of content that could potentially harm viewers or violate laws and regulations.

2. **Digital Rights Management (DRM):** Use DRM technologies to protect digital content from unauthorized copying and

distribution. This will help protect the intellectual property of content owners and prevent piracy.

3. **Encryption:** Encrypt video and multimedia content to protect it from unauthorized access or interception during transmission. This will help ensure that the content remains secure and confidential.

4. **Content Delivery Networks (CDNs):** Use CDNs to distribute video and multimedia content across multiple servers and locations. This will help improve the speed and reliability of content delivery, while also reducing the risk of network congestion and downtime.

Scope of the feature: Might be dropped due to increase in excessive complexity of the project.

Discussion forums and messaging

1. **Create clear guidelines:** Establish clear guidelines for the use of the platform, including acceptable behavior, language, and content. Make sure to clearly communicate these guidelines to all users and enforce them consistently.

2. **Moderate the platform:** Have a team of moderators who can monitor the platform and take action if necessary. This

can include removing inappropriate content, warning or banning users who violate guidelines, and addressing any complaints or concerns that arise.

3. **Use technology tools:** Consider using technology tools such as filters and spam detectors to automatically detect and remove inappropriate content.

4. **Encourage responsible behavior:** Encourage users to be responsible when using the platform. This can include reminding them to think before they post, to respect other users, and to avoid sharing personal information.

Scope of the feature: Might be dropped due to increase in excessive complexity of the project.