Software Engineering Project

User requirements and application specifications

Phase II

**On this project we are working on a software application that aims to provide a new management system for students and advisors in universities or schools. The application will automate the process of finding information related to absences and grades, and it will be easily accessible to both students and advisors.**

**With this application, we can improve the efficiency and accuracy of the management process by eliminating the need for manual processes and reducing the likelihood of errors. Additionally, it can save time and resources, allowing advisors and students to focus on other essential tasks.**

**To ensure the success of this project, you may consider the following steps:**

* **Define the requirements of the software application by gathering feedback from students and advisors.**
* **Create a detailed design of the application, including its functionality, interface, and database structure.**
* **Develop and test the software application, ensuring that it meets the requirements and is user-friendly.**
* **Deploy the application in a controlled environment and test it thoroughly to ensure that it performs as expected.**
* **Train the users on how to use the application, and provide technical support as needed.**

**By following these steps, we can ensure the successful development and deployment of the software application, which can provide a better way of managing information related to absences and grades for students and advisors in universities or schools.**

**For the application to be complete we have to define the user requirements and the application specifications**

**User Requirements:**

* **The application should be easily accessible to both students and advisors.**
* **Students should be able to view their absences and grades for each course they are enrolled in.**
* **Advisors should be able to view the absences and grades of their advisees for each course.**
* **The application should provide real-time updates to ensure accuracy.**
* **The application should be user-friendly and easy to navigate.**
* **The application should be secure to protect sensitive student data.**
* **The application should be customizable to fit the specific needs of each university or school.**

**Application Specifications:**

* **The application should be web-based and accessible via a browser on any device.**
* **The application should have a responsive design that adjusts to different screen sizes.**
* **The application should be built using a secure and reliable technology stack.**
* **The application should have a database to store student and course data.**
* **The application should have a user authentication system to ensure security.**
* **The application should have an admin panel for administrators to manage the system.**
* **The application should provide an intuitive user interface that is easy to use and navigate.**
* **The application should have a search function to quickly find information.**
* **The application should provide real-time updates for absences and grades.**
* **The application should be customizable to fit the branding and specific needs of each university or school.**
* **These are just some potential user requirements and application specifications based on the project description. Depending on the specific needs of the university or school, additional requirements and specifications may need to be considered.**

**Requirements Specifications:**

**User and System Requirements:**

* **Students should be able to access the application using their university or school login credentials.**
* **Students should be able to view their course schedules, absences, and grades.**
* **Students should be able to submit requests to their advisors for assistance or schedule changes.**
* **Advisors should be able to access the application using their university or school login credentials.**
* **Advisors should be able to view their advisees' course schedules, absences, and grades.**
* **Advisors should be able to communicate with their advisees and respond to requests for assistance or schedule changes.**
* **The application should be easy to use, intuitive, and accessible to users with different levels of technical proficiency.**
* **The application should be available 24/7 to accommodate users' needs and schedules.**
* **The application should have a responsive design that adapts to different screen sizes and devices.**
* **The application should be secure to protect users' personal and academic data.**
* **The application should be built using a scalable and secure technology stack.**
* **The application should use a database to store and manage user and course data.**
* **The application should have an authentication system to ensure secure access to user accounts.**
* **The application should have a responsive front-end user interface that is easy to navigate and use.**
* **The application should have a back-end management system that enables administrators to monitor and manage user activity and data.**
* **The application should provide real-time updates for users to view their absences and grades.**
* **The application should have a messaging system to facilitate communication between advisors and students.**
* **The application should be hosted on a reliable and scalable server infrastructure.**
* **The application should be optimized for fast loading and high performance.**
* **The application should have regular backups and disaster recovery mechanisms to ensure data integrity and availability.**
* **These are just some potential user and system requirements based on the project description. Depending on the specific needs and constraints of the university or school, additional requirements may need to be considered.**

**Functional Requirements:**

* **User Registration: The application should allow students and advisors to create accounts using their university or school email addresses and set up passwords to access the system.**
* **User Authentication: The application should verify users' identities using their email and password credentials.**
* **Course Scheduling: The application should enable advisors to create course schedules and make them available for students to view.**
* **Course Enrollment: The application should allow students to enroll in courses and make changes to their course schedules as needed.**
* **Attendance Management: The application should allow advisors to record students' attendance in each course and update the records in real-time.**
* **Grade Management: The application should allow advisors to record students' grades for assignments, quizzes, and exams in each course and update the records in real-time.**
* **Request Management: The application should allow students to submit requests to their advisors for assistance or schedule changes and enable advisors to respond to those requests.**
* **Notification System: The application should provide a notification system to alert users of important updates, such as new grades, schedule changes, or advisor responses.**
* **Reporting System: The application should provide reports for administrators to analyze and track student attendance, grades, and requests for assistance.**
* **Customization: The application should allow administrators to customize the system's features, such as adding or removing fields or modifying the user interface to fit the needs of the university or school.**

**These are just some potential functional requirements based on the project description. Depending on the specific needs and constraints of the university or school, additional functional requirements may need to be considered.**

**External stakeholders :**

* **Parents and Guardians: Parents and guardians of students could be impacted by this software application as they may have access to their child's grades and attendance records, enabling them to stay more informed and involved in their child's academic progress.**
* **Accreditation Agencies: Accreditation agencies could benefit from the improved record-keeping and reporting that this software application could provide, enabling them to assess the quality of the university or school more accurately.**
* **Potential Employers: Potential employers may also be impacted by this software application, as it could provide more transparent and accessible information about a student's academic record and performance, making it easier for them to evaluate job candidates.**
* **Government Agencies: Government agencies responsible for regulating education standards and policies could benefit from the data and analytics that this software application could provide, enabling them to make more informed decisions and policies.**
* **Third-Party Vendors: Third-party vendors, such as textbook publishers or educational technology providers, could also be impacted by this software application if it integrates with their products or services.**