CSC 431

SyllaPlan

Software Requirements Specification (SRS)

Team 07

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Version History

Version	Date	Author(s)	Change Comments
1.0	02/20/22	Badgamia, Aashay Andrew Shatsky Julian Cantillo	First Draft

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1. System Requirements

1.1. Functional Requirements

1.1.1. **Account Creation**

Title	Account Creation
Description	User is able to create an account using either their email address or an existing google account
Priority	0
Precondition(s)	Once extension is installed, user clicks on the extension icon and then clicks on sign up.
Basic Flow	• User downloads the Chrome Extension from the google store • When application opens, to sign in or make an account • Application prompts user to enter user information, email and password
Postconditions(s)	After user enters the required information, the new account is stored into the database and the user now has a working account
Use Case Diagram	3.1

1.1.2. **Account Login**

Title	Account Login
Description	User is able to sign into an existing account
Priority	0
Precondition(s)	Account must already be created and user has been signed out of application
Basic Flow	• User loads the application • Application prompts the user to sign in or make an account • User clicks the sign in option • User is promted to enter the required information in order to sign in, email and password • If information is correct the app proceeds to the following page, otherwise requests user to enter information again or make an account
Postconditions(s)	User enters correct information and is loaded into the home page
Use Case Diagram	3.1

1.1.3. **Create List of Classes**

Title	Create List of Classes
Description	User is able to enter the classes he/she is enrolled in
Priority	1
Precondition(s)	User must have created and is logged into his/her account.
Basic Flow	• Application requests the user to enter classes • User enters all the classes which they have enrolled in
Postconditions(s)	The classes which the user entered in will be partitioned and given an id for later use.
Use Case Diagram	3.1

1.1.4. **Pdf Scraping**

Title	Pdf Scraping
Description	The application is able to scrape the current pdf-page the student is on.
Priority	1
Precondition(s)	User must have classes created, an account created, and must be logged into to his/her account. User should also currently be on a pdf page that has scrapable data.
Basic Flow	• User opens a syllabus which they want to be read by SyllaPlan • From the chrome browers, user opens and runs SyllaPlan directly on the web document which contains the syllabus. • SyllaPlan prompts user to enter which class this syllabus is for. Depending on the answer, the application will scrape the PDF
Postconditions(s)	The information is processed and given to the interpretation program
Use Case Diagram	3.1

1.1.5. **Syllabus Interpretation**

Title	Pdf Scraping
Description	From the pdf-scrape, the program extracts relevant information including course name, instructor name, contact information, important dates, and grading criteria.
Priority	1
Precondition(s)	User must have classes created, an account created, and must be logged into to his/her account. User must have pdf-scraped the current pdf page.
Basic Flow	• User has pressed the scrape button, and SyllaPlan is interpreting the data on the PDF • SyllaPlan will output a list of key points in the syllabus such as grading criteria, assignment due dates, exam dates, teacher contact information, etc.
Postconditions(s)	SyllaPlan displays scraped information to be verified
Use Case Diagram	3.1

1.1.6. **View Interpreted Data and Verify**

Title	View Schedule Interpreted Data and Verify
Description	From the interpretation of the syllabus, the user should be able to view all extracted points, and verify the validity of the information.
Priority	1
Precondition(s)	User must have classes created, an account created, and must be logged into to his/her account. User must have pdf-scraped the current pdf page, and obtained results from interpretation.
Basic Flow	• Once the data is interpreted, the user will be able to view all the key information relevant to the class in SyllaPlan UI • Here, the user will have the option to add data, edit data, and remove data • Once all data is correct, user clicks "accept" button and SyllaPlan adds data to the class description and calendar.
Postconditions(s)	Syllabus information is confirmed and added to database
Use Case Diagram	3.1

1.1.7. **Add Manual Data**

Title	View Schedule Interpreted Data and Verify
Description	If the schedule/information for classes is missing points, the user is able to manually add data relevant to said class.
Priority	1
Precondition(s)	User must have classes created, an account created, and must be logged into to his/her account.
Basic Flow	• If the user wants to input information about the class which was not included in the data from the pdf scraper, they will click the class they want and click add information "+" • User inputs the information
Postconditions(s)	Inputted information is appended to existing database entry
Use Case Diagram	3.1

1.1.8. **View Schedule in Calendar**

Title	View Schedule in Calendar
Description	Extension will show relevant information scraped from syllabi in calendar format
Priority	1
Precondition(s)	User must have an account created and be logged in to the account.
Basic Flow	• User clicks Calendar View • User is able to view all assignments/exams/labs for specific dates relevant to all enrolled classes
Postconditions(s)	User is able to view schedule in calendar format
Use Case Diagram	3.1

1.1.9. Change Time Horizon View of Calendar

Title	Change Time Horizon View of Calendar
Description	User will be able to view schedules for certain time periods, whether that be daily or a range of dates.
Priority	3
Precondition(s)	User is logged in to an account, has account created, and the calendar page is currently being displayed
Basic Flow	• User clicks on the change time horizon button • Application displays 3 options: daily, weekly, and monthly • Application switches calendar layout to the option selected by user
Postconditions(s)	Calendar is displayed using an updated formatting
Use Case Diagram	3.1

1.1.10. **View Class Individually**

Title	View Class Individually
Description	Extension will show relevant information scraped from syllabi specific to a class when user looks at a class.
Priority	2
Precondition(s)	User must have an account created, be logged in, and have at least one class created.
Basic Flow	• User clicks on specific class from lit • User is able to view that class specifically and relevant information
Postconditions(s)	Individual class is displayed with all relevant information
Use Case Diagram	3.1

1.1.11. **Logout**

Title	Logout
Description	User is able to log out of the application
Priority	1
Precondition(s)	User is signed into an account and the account
Basic Flow	• User clicks on the account settings button • User clicks on log out • Application shows screen asking for confirmation • Application ends current session and returns to login screen
Postconditions(s)	SyllaPlan returns to login screen
Use Case Diagram	3.1

1.1.12. Error Reporting

Title	Error Reporting
Description	When there are errors such as wrong interpretations, the user is able to report the errors.
Priority	1
Applicable FR(s)	All FRs

1.1.13. Efficient Filtering and Sorting

Title	Efficient Filtering and Sorting
Description	The user can sort and filter based on certain classes he/she wants to view.
Priority	2
Applicable FR(s)	1.1.10

1.2. Non-Functional Requirements

1.2.1. **Pdf-Scraping Performance**

Title	PDF-Scraping Performance
Description	The extension should respond quickly and provide a smooth user experience. It should be optimized for performance to ensure it does not slow down the browser or crash frequently. It should perform the scrape in under 5 seconds.
Priority	1
Applicable FR(s)	1.1.4

1.2.2. **Interpretation Reliability**

Title	Interpretation Reliability
Description	The program should be interpreting the syllabi with substantial accuracy and dependability. It should return accurate results frequently.
Priority	2
Applicable FR(s)	1.1.5

1.2.3. **Useful Notifications**

Title	Useful Notifications
Description	The extension should provide user with notifications about upcoming assignments, important dates, and quizzes/exams.
Priority	3
Applicable FR(s)	1.1.8

1.2.4. Color Coding Classes

Title	Color Coding Classes
Description	The user should be able to choose different colors to represent different classes, which will clarify the relation between events and classes.
Priority	3
Applicable FR(s)	1.1.10

1.2.5. User Data Privacy and Security

Title	User Data Privacy and Security
Description	All the user data needs to be properly secured and not accessible to other nodes without proper permissions.
Priority	0
Applicable FR(s)	All FRs

2.System Constraints
2.1. Tool Constraints

2.1.1. Development Environment

Title	Web Development Framework
Description	Since SyllaPlan is a Chrome Extension, it will need to be programmed using a web development framework such as Angular, React, or Vue.js. Needs to be compatible with Chrome Extension regulations.
Priority	2

2.1.2. Database Constraint

Title	Database Constraint
Description	Since SyllaPlan is a Chrome Extension, it will need to be use a database compatible with Chrome Extensions to store users' data in a secure manner such as IndexedDB.
Priority	2

2.2. Language Constraints

2.2.1. Chrome Extension Framework

Title	HTML, CSS, and JavaScript
Description	Chrome extensions are developed as a mini-website using CSS, JavaScript, and HTML.
Priority	1

2.2.2. Database Language Constraint

Title	JavaScript
Description	To communicate with the database, IndexedDB, JavaScript will be used.
Priority	1

2.3. Platform Constraints

2.3.1. **Web Browser Constraint**

Title	Google Chrome
Description	Since SyllaPlan is a Chrome web extension, it must work with the latest version of Google Chrome
Priority	1

2.4. Hardware Constraints

2.4.1. Desktop Extension Constraint

Title	Desktop Extension Constraint
Description	The extension will only be supported on the desktop version of Google Chrome and therefore must be used on a desktop computer.
Priority	1

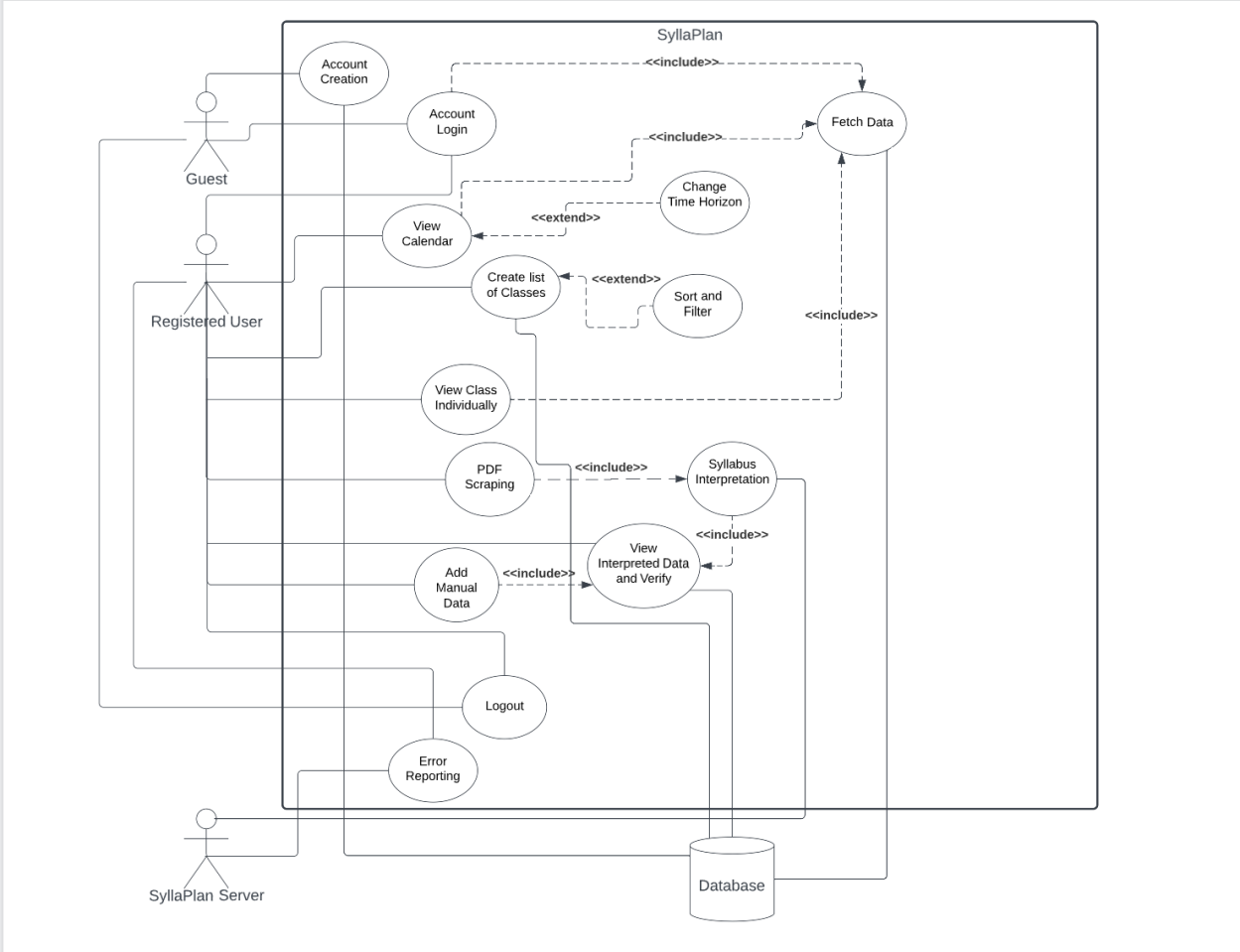
2.5. Deployment Constraints

2.5.1. Deployment Environment

Title	Web Deployment Framework
Description	Since SyllaPlan is a Chrome Extension, it will need to be compatible with the latest version of Chrome.
Priority	1

3.Requirements Modeling

3.1. Use-Case Diagram



4.Evolutionary Requirements
4.1. Functional Requirements

4.1.1. Blackboard Integration

Title	Blackboard Integration
Description	User can link their Blackboard account to automatically populate SyllaPlan with upcoming assignments and grades
Priority	4
Precondition(s)	User needs to be signed in to their SyllaPlan account. User needs to be registered with Blackboard and have their account information on hand
Postconditions(s)	SyllaPlan is able to automatically populate calendar and class information from blackboard.

4.2. Non-Functional Requirements

4.2.1. Suggestion Automation

Title	Automatic Suggestions for Adding Data to Calendar
Description	With a new post or announcement to Blackboard, the extension will automatically notify the user with a potential addition his/her planner/schedule.
Priority	4
Applicable FR(s)	4.1.1