Functional Specification

Application Description:

The application is a daily planner/calendar utilized to add, remove, edit, and organize events assigned by a registered user. A user is required to create an account with the application. The application has a main interface that allows users to track the events of the current day in detail and also view the title of various events occurring in the current week. Users will have the ability to view a larger calendar containing the events of the current month. Users can view and change their username and password through the user profile interface. Events will have a variety of potential inputs giving the user the ability to control the level of detail involved in creating an event.

1. User Authentication Function:

1.1 Log-in: The user logs in utilizing a username and password.
1.2 Create Account: The user creates an account by providing username, password, and password-confirmation.The system verifies that the username created by the user is unique and that both the password and password-confirmation match. If there is an error the user is notified.

2. Main Interface Function:

2.1 Weekly Calendar: The system displays a sub calendar of the current week containing the titles of "events" assigned to specific days of the current week. Events are selected to display event details. Completed "events" are green and pending "events are blue.
2.2 Daily Planner: The system displays a detailed list of "events" assigned to the current day with a description, time, priority level, course, and title. Completed "events" are green and pending "events are blue.

3. Add Events Function:

The system displays a combination of text inputs and list boxes for the user to construct an "event" entry:
- Title: A title for the event (text input)
- Date: The day and month of the "event" (list box)
- Time: The time the event is occurring that day (list box)
- Course: The course associated with the event (text input)
- Description: A brief description of the "event" (text input)
- Priority Level: A level between 1-5 (5 being highest priority) (list box)

4. Event Details Function:

4.1 Event Details: The system displays a window containing the details assigned to the "event" selected by the user. The details are assigned by the user at the creation of the event (title, date, time, course, description, and priority level)
4.2 Edit Event: The system allows the user to edit the event details from the event specific details window.
4.3 Remove Event: The system allows the user to remove an event utilizing the event specific details window.
4.4 Mark as Complete: The system allows the user to mark the event as complete from the event specific details window.
4.4 Reminders: Each event shall have an option to enable/disable reminders. Users can choose their preferred reminder type for each event and customize the reminder time interval for each event.

5. <u>Calendar Function:</u>

The system displays the calendar of the current month. The title of each "event" is displayed on the day it takes place. Event titles are selected to view event details regarding the event. Completed "events" are green and pending "events are blue.

6. <u>User Profile Function:</u>

6.1 The system displays the user's username and password.
6.2 The user can delete their account via the user profile page.

7. <u>Navigation Function:</u>

7.1 Task Bar: The system displays a task bar that allows the user to navigate the planner application utilizing a variety of buttons.

Buttons:
- Home: Routes the user to the **Main Interface**.
- User Profile: Routes the user to a page to alter data pertaining to the user.
- Add Events: Routes the user to a page to create calendar "events".
- Calendar: Routes the user to a page that displays the events of the current month.

Glossary:

Event: A scheduled activity or occurrence, such as a meeting, appointment, class, or task, that the user wants to track and manage within the calendar application.

Completed Event: An event that has already taken place or has been marked as finished by the user.

Pending Event: An event that is scheduled to occur in the future and has not yet been completed.

User Profile: A section within the application where the user can view and manage their personal information, such as username, password, and other preferences.

Task Bar: A persistent or contextually appearing navigation element within the application's interface that provides quick access to key functionalities or views, such as the Main Interface, User Profile, Add Events page, and Calendar view.

Main Interface: The primary screen or dashboard of the application, providing an overview of the user's schedule, typically including a daily planner and a weekly calendar.

Daily Planner: A view within the application that displays the events scheduled for the current day in detail, including their descriptions, times, priority levels, courses, and titles.

Weekly Calendar: A view that shows the events scheduled for the current week, typically displaying only the titles of the events on their respective days.

Monthly Calendar: A view that presents the entire month's schedule, allowing the user to see the distribution of events throughout the month.

Reminders: Notifications sent to the user to alert them of upcoming events or tasks. These can be delivered through various channels, such as email or push notifications.

Use Cases

0. Initiate Planner Application:

1. The user locates the application file
2. The user double clicks the application file or icon

1.1 Log-in:

1. The user carries out **Initiate Planner Application**.
2. The user inputs the username and password associated with their account.
3. The user clicks the "Log-in" button.
4. The application routes the user to the Main Interface.

Variant #1: Incorrect login details.

1.1 Start at Step 2.
1.2 The user enters an incorrect username or password.
1.3 The application displays an error message: "Invalid login details."
1.4 Continue with Step 2 for a retry.

1.2 Create Account:

1. The user carries out **Initiate Planner Application**.
2. The user selects "Create Account".
3. The application routes the user to the Create Account Interface and prompts the user for the following information
   "Username:
   Password:
   Confirm Password:"
4. The user enters the requested information and clicks the "create account" button.
5. The application routes the user to the User Authentication Interface.

Variant #1: Password mismatch

1.1 Start at Step 3.
1.2 The user enters non-matching passwords in "Password" and "Confirm Password."
1.3 The application displays an error message: "Passwords do not match."
1.4 Continue with Step 4 after the user corrects the passwords.

2. View Main Interface:

1. The user carries out **Log-in.**

3. Add Event:

1. The user logs into the application.
2. The user navigates to the Calendar Interface.
3. The user clicks the "Add Event" button.
4. The application prompts the user to input event details such as:
   a. Event Name
   b. Date
   c. Start Time
   d. End Time
   e. Category
   f. Description
5. The user optionally checks the "Set Reminder" checkbox/toggle.
6. If the checkbox is checked the application displays reminder options:
   a. Reminder Type: Email, Push notification
   b. Reminder Time: 15 mins before, 30 mins before, 1hr before, ect
7. The user fills out the form and clicks "Save Event."
8. The application adds the event to the selected date and time in the calendar and provides a confirmation message.

Variant #1: Missing required fields

1.1 Start at Step 4.
1.2 The user leaves one or more required fields blank (not all fields will be a requirement).
1.3 The application displays a message: "Please complete all required fields."
1.4 The user corrects the fields and clicks "Save Event" again.

Variant #2: Event conflicts with an existing event

2.1 Start at Step 5.
2.2 The user selects a date and time for the new event that conflicts with an existing event (overlapping times).
2.3 The application displays a warning: "Event conflicts with an existing event with the same date and time. Do you wish to continue?"
2.4 The user can either:

- Click "Yes" to proceed with the conflict.
- Click "No" to modify the event time.

2.5 Continue with Step 6.

4.1 View Event Details:

1. The user logs into the application.
2. The user navigates to the Calendar Interface.
3. The user selects an event from the calendar (daily, weekly, or calendar view).
4. The application displays the details of the selected event, including:
   a. Event Name
   b. Date
   c. Start Time
   d. End Time
   e. Category
   f. Description
   g. If a reminder is set for the event:
      i. Reminder Type/Time
5. The user clicks "Back" to return to the calendar view.

Variant #1. Edit from event details

1.1 Start at Step 5.
1.2 The user clicks "Edit" instead of "Back."
1.3 The application proceeds with the "Edit Event" use case.

4.2 Edit Event:

1. The user logs into the application.
2. The user navigates to the Calendar Interface.
3. The user selects the event to be edited.
4. The user clicks the "Edit Event" button.
5. The application displays the event details.
6. The user edits the desired fields and clicks "Save Changes."
7. The application updates the event and displays a confirmation message.

Variant #1: Abandon changes

1.1 Start at Step 6.
1.2 The user clicks "Cancel" to save changes.
1.3 The application keeps the event unchanged.

4.3 Remove Event:

1. The user logs into the application.
2. The user navigates to the Calendar Interface.
3. The user selects the event to be removed (this can be from a daily, weekly, or calendar view).
4. The user clicks the "Remove Event" button.
5. The application displays a confirmation prompt: "Are you sure you want to remove this event?"
6. The user confirms the action.
7. The application removes the event from the calendar and provides a confirmation message.

Variant #1: Cancel event removal

1.1 Start at Step 5.
1.2 The user cancels the action instead of confirming.
1.3 The application keeps the event in the calendar.

4.4 Mark Event as Complete:

1. The user logs into the application.
2. The user navigates to the Calendar Interface.
3. The user selects the event they wish to mark as complete.
4. The user clicks the "Mark as Complete" button.
5. The application changes the event status to "Completed."
6. The application displays a confirmation message.

Variant #1. Undo mark as complete

1.1 Start at Step 5.
1.2 The user clicks "Undo Complete" from the event.
1.3 The application reverts the status of the event.

Variant #2: Event already completed

2.1 Start at Step 4.
2.2 The user selects an event that has already been marked as complete.
2.3 The application displays a message: "This event has already been marked as complete."
2.4 The user clicks "OK" to return to the calendar view.

5. <u>View Calendar:</u>

1. The user logs into the application.
2. The user navigates to the Calendar Interface.
3. The user selects one of the following views:
   a. Daily View
   b. Weekly View
   c. Monthly View
4. The application displays the calendar with events for the selected view.

Variant #1: No events to display. Add Event.

1.1 Start at Step 4
1.2 The calendar view is empty because there are no events to display
1.3 The application displays a message: "No events scheduled for this date."
1.4 The user clicks "Add Event" or navigates to a different date.

6. <u>Delete Account:</u>

1. The user logs into the application.
2. The user navigates to the User Settings Interface.
3. The user selects "Delete Account."
4. The application prompts the user to confirm the account deletion: "Are you sure you want to delete your account? This action is irreversible."
5. The user confirms the deletion by entering their password and clicking "Delete Account."
6. The application deletes the user account and logs the user out, displaying a confirmation message.

Variant #1. Cancel account deletion

1.1 Start at Step 5.
1.2 The user cancels the action instead of entering the password.
1.3 The application keeps the account active.