FINAL Project Report
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Chronos - Timetable Builder
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2. **Krish Patel**
3. **Shivank Goel**
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Link to Project:
https://github.com/KrishPatel13/The-Hamburglars

SECTION 1: REPORT SUMMARY

- "Chronos" was developed with the intention of developing a flexible time management tool that encourages goal accomplishment and enables simple adjustment. Chronos is designed for students who need assistance in striking and maintaining a healthy work-life balance while remaining adaptable to changing situations.

- Chronos' calendar system will meet this demand by enabling users to set up events that can be modified later. The original idea was that an event can be clicked and dragged to move it around the calendar, so the user can quickly and easily change the time of the event. Due to time constraints, it was changed so that events for a selected date are displayed, and then when selected can be edited using a menu.

- Chronos will allow users to design prizes for themselves that will only be "awarded" if specific events are fulfilled, further encouraging work-life balance. This will help users remember to take time for themselves and prevent burnout from relentlessly grinding.

- Users will find Chronos useful since it blends life-gamification and motivational aspects with the schedule-making functionality of other applications like Notion. Chronos will assist users in maintaining a healthy work-life balance and developing themselves along the way by merging the two aspects and generalizing their application to any issue like school or exercise.

SECTION 2: PROCESS DOCUMENTATION

2.1 SPRINT 1 OVERVIEW

2.1.1 Sprint Overview:

The goal for this sprint is to complete the basic functionality needed for the application to be used as intended. This includes the main calendar interface, a way to create events and goals, and a way to change the color of the GUI for accessibility.

2.1.2 Stories Selected for this Sprint:

User stories 1.1, 1.2, 1.3, and 1.4 were chosen as part of Sprint 1.

- Team member Krish was responsible for implementing a way for users to create events that cover a certain time frame and a certain goal.
- Team member Khubaib was responsible for setting up a schedule in the form of a calendar, which makes it easy to place events.
- Team Member Jacob was responsible for providing incentives to the goals achieved by users by being able to set the user's own rewards for completing certain tasks.
- Team Member Shivank was responsible for adding an accessibility feature to the application, which allows users to choose a background and a font color for the application.

2.1.3 Team Capacity:

At the time of the sprint, the expected deadline to complete the selected user stories was Friday, November 25, 2022.

2.1.4 Participants:

- Krish Patel: As part of sprint 1, Krish worked on the Event, EventCreatorView Class, and EventTest class.
- Jacob Youssef: As part of sprint 1, Jacob created branches as per the assigned user stories. Jacob also wrote pseudocode and was also responsible for implementing the Goal, GoalCompleteView, and GoalListView classes.
- Shivank Goel: As part of sprint 1, Shivank worked on Color class and Color.FXML to implement JavaFX.
- Khubaib Ahmed: As part of sprint 1, Khubaib created a CalendarView class and worked on launching an application window.

2.1.5 Tasks Completed:

After sprint 1, the application had some basic functionality. Users were able to interact with the GUI to view the calendar and create goals and events, but events cannot be viewed or completed from the calendar yet. User stories 1.1, 1.2, and 1.3 were complete, while user story 1.4 was still in progress.

2.2 SPRINT 1 PRODUCT BACKLOG

User Story	Status	Additional notes
1.1: Create events	Complete	The event creation was completed.
1.2: Calendar view	Complete	The drag and drop feature was excluded due to time constraints.
1.3: Goals and rewards	Complete	The goal system was altered so that all events share a list of goals.
1.4: Edit color	Ongoing	Implementing this user story was more involved than expected, so it continues into sprint 2.
1.7: Custom point values	Removed	This user story was removed, as the feature was implemented naturally as part of 1.1 and 1.3.

2.3 SPRINT 1 CODE REVIEWS

Below are some code reviews that took place during sprint 1:

Story Reviewed	Name of Reviewer	Pull Request Link
[DEV-1.3] Goals and Rewards	Krish	https://github.com/Krish Patel13/The-Hamburglars /pull/6
[DEV-1.2] Calendar View	Khubaib	https://github.com/Krish Patel13/The-Hamburglars /pull/5
[DEV-1.1] Create Events	Shivank	https://github.com/Krish Patel13/The-Hamburglars /pull/8
[DEV-1.4] Edit Colour	Jacob	https://github.com/Krish Patel13/The-Hamburglars /pull/9

2.4 SPRINT 1 RETROSPECTIVE

- Participants in the meeting: Krish, Jacob, Shivank, Khubaib
- What went well in the sprint was that it was completed within the timeframe and each team-member was supportive to each other. The team was also able to revise the original plan to make it more realistic and able to be realized in the given timeframe.
- The obstacles faced were with git, namely that merging or pulling the files caused errors. Some time was spent on merging our files and resolving conflicts.
- The team's best performance was time management and dedication.
- Unfinished tasks: User stories 1.4, 1.5, 1.6, 1.7, and 1.8.

2.5. SPRINT 2 OVERVIEW

2.5.1 Sprint Overview:
The goal for this sprint was to finish the user stories needed for a minimum viable product by implementing core functions by the end of the sprint on December 7th.

2.5.2 Stories Selected for This Sprint:
The selected user stories for this sprint were 1.4, 1.5, 1.6, and 1.7.

- Team member Krish was responsible for allowing users to freely edit the names, descriptions, time, and point values of all the events.
- Team member Khubaib was responsible for displaying events in a concise list, sorted by date, where a user can select an event to complete.
- Team Member Jacob was responsible for saving the progress made by the user so that they can continue where they left off.
- Team Member Shivank was responsible for completing the accessibility feature for the application, which allows users to choose a background and a font color for the application.

2.5.3 Team Capacity:
At the time of the sprint, the expected deadline to complete the selected user stories was Monday, December 5, 2022.

2.5.4 Participants:
- Krish Patel: As part of sprint 2, Krish worked on TimePoint and TimeBehaviour, and EventEditiorView classes.
- Jacob Youssef: As part of sprint 2, Jacob worked on the CalendarView and CalendarModel classes.
- Shivank Goel: As part of sprint 2, Shivank worked on the Color class,

- Khubaib Ahmed: As part of sprint 2, Khubaib worked on CalendarView class.

2.5.5 Tasks Completed:

After sprint 2, the application was fully functional. Users were able to interact with the GUI to view the Calendar, make new events, edit existing events, make new goals, and change the colors of the background and font. Due to time constraints, certain user stories that were originally planned were removed, such as the undo feature which was user story 1.8.

2.6 SPRINT 2 PRODUCT BACKLOG

User Story	Status	Additional notes
1.4: Edit color	Complete	Implementing this user story was more involved than expected, so it continued into sprint 2. In sprint 2, this user story was finished.
1.5: Display events	Complete	
1.6: Edit Events	Complete	
1.7: Save/Load View	Complete	
1.8: The undo button	Removed	This user story was removed due to time constraints.

2.7 SPRINT 2 CODE REVIEWS

- Below are some code reviews that took place during sprint 2:

Story Reviewed	Name of Reviewer	Pull Request Link
[DEV-1.7] Saving and loading	Krish	https://github.com/KrishPatel13/The-Hamburglars/pull/11
[DEV-1.5] Display events	Jacob	https://github.com/KrishPatel13/The-Hamburglars/pull/12
[DEV-1.6] Edit events	Shivank	https://github.com/KrishPatel13/The-Hamburglars/pull/16
[DEV-1.6] Edit events	Khubaib	https://github.com/KrishPatel13/The-Hamburglars/pull/18

2.8 SPRINT 2: RETROSPECTIVE

- Participants in the meeting: Krish, Jacob, Shivank, Khubaib
- It was the first experience of software development in a team for every team member, therefore everyone was supportive and cooperative towards each other.
- There was amazing support from the professor and TA Jovana.
- The obstacles the team faced were with git, where merging files led to conflict at times. This issue persisted from sprint 1, but it was resolved by manually resolving conflicts.
- One thing to focus on for next time is to ensure that each member's work is separate enough so that conflicts are minimized.

SECTION 3: SUMMARY

The core features of creating events for a day and for multiple days, marking those events as completed, awarding points, and completing goals when events are completed were all successfully developed by the team. The team was also successful in implementing our primary accessibility feature, which allows users to change the text and background colors on a page to suit their preferences. Assigning topics to each event would be a future feature that would allow goals to be more discerning about goals.

The team was successful in making a calendar and displaying it, which allowed for the editing and display of events. However, due to time constraints, events could not be displayed and dragged as we had originally intended on the calendar. Therefore, pre-existing modules were used instead of creating a custom date display, and events for a date were shown in a list on the side. The list items' font sizes might be increased in the future, and events might be represented more visually on the calendar. The event edited must change its name due to a bug, but events can be freely edited through an event editing menu. However, this is a minor issue that can be resolved and avoided.

The team's initial plan for the project was to use the Command and Prototype pattern to make it easier to use undo and other operations like goal completion and simple event cloning. However, the focus was changed due to time constraints and was further motivated by the realization that our app needed to save and load the added events and goals. Instead of using the CalendarModel design pattern, the team chose to serialize the data management model in accordance with the Memento design pattern. In

order to avoid mishaps in the event that a client tries to run the app more than once at once, the team also decided to implement the Singleton pattern in place of the CalendarView.

It was planned to include a Screen Reader as an additional feature to make our app more accessible, but time constraints prevented us from doing so. While buttons and menus may be simple to navigate in the future, reading events on the calendar may take some time and possibly a complete redesign of the display.

To sum up, the project was successful in completing its essential components and realizing its primary goal. It can still be improved and made even more useful for users in terms of time management.

Thank you,
Team: The Hamburglars.