Team BJJ Deliverable 1

Vision:

Our team's goal for this project is to complete and implement a dual-alarm AM/FM alarm clock application within the span of one whole semester (3 months). Given the amount of work needed to complete this project, our team will be on a tight timeframe as all members of our team are working full time or are full time students. This could present some scheduling conflicts as the project continues on, but with proper planning we should be able to meet all deadlines.

The purpose of this project is to learn about the agile development process and develop key skills that will be needed in our field upon our completion of the undergraduate program at the College of Charleston.

Use Case UC1: *Using The Alarm*

Scope: Dual-alarm AM/FM Software

Level: User Goal

Primary Actor: Owner/User of Alarm Clock

Stakeholders and Interests:

- Owner/User: Wants to wake up on-time reliably. Wants to be able to set up customizable alarms based on specific need.

Preconditions: Time/Date has already been set.

Success Guarantee: Alarm time is successfully saved. Alarm goes off at the set time. Alarm does not sound if not set. If a repeat function is selected, alarm goes off on those days.

Main Success Scenario:

1. User initiates setting a new alarm.
2. User sets the hour of the alarm.
3. User sets the minutes of the alarm.
4. User chooses whether the alarm is during the AM/PM.
5. User chooses how often the alarm repeats (Everyday, Mondays, etc).
6. User chooses the sound of the alarm.
7. Alarm time is saved in the application with the option to enable/disable.
8. Alarm then goes off at the specified time.

Extensions:

1a. Alarm is already set.

- User initiates setting a separate alarm from the one already set.
- User sets the alarm from step 2 in the main scenario.

2a. User wants to set every weekday.

- User selects the option of weekday.
- The alarm is expected to sound every weekday at the specified time without re-enabling alarm

2b. User wants to set repeat to every weekend.

- User selects the option of weekday.
- The alarm is expected to sound every weekday at the specified time without re-enabling alarm

3a. User wants radio to play as alarm.

- User begins by playing

4a. User uses snooze feature.

- While the alarm is sounding, the user initiates the snooze feature.
- The alarm is then muted.
- A timer is set for ten minutes to initiate the alarm again.
- This cycle continues until the alarm is disabled.

5a. Alarm goes off while no one is around to turn it off.

- Alarm will turn off automatically after 2 minutes.

Special Requirements:

- Response time of setting the alarm should be seemingly instant.
- Should be easy for the user to understand.
- Alarm should sound only when enabled and should do so consistently

Technology and Data Variations List:

Frequency of Occurrence: Infrequent. User may add a new alarm.

Open Issues:

- Should the user be allowed to adjust the volume of the alarm?
- Should we allow conversion of military time?
- Should radio have a feature to turn off (like auto sleep function) after being on for a certain period of time relating as to not interfere with using the radio as an alarm?

Use Case UC2: *Playing The Radio*

Scope: Dual-alarm AM/FM Software

Level: User Goal

Primary Actor: Owner/User of Alarm Clock

Stakeholders and Interests:

- Owner/User: Wants to be able to use the AM/FM radio with no issues.

Preconditions: Dual-alarm AM/FM radio is powered on.

Success Guarantee: User is able to listen to the radio. The user also has option of switching between AM/FM stations. User is able to tune to specific stations.

Main Success Scenario:

1. User initiates playing the radio.
2. A radio station is selected and the broadcast is retrieved.

Extensions:

1a. User wants to change the current radio station.

- User will begin by tuning through the different possible stations.
- User will stop tuning when they reach a station they like.

1b. User wants to switch from the AM channels frequencies to the FM frequency channels

- User selects the option of AM or FM frequency stations.
- The radio will begin playing AM or FM stations depending on what the user selected in the previous step.

2a. User wishes to change the volume of the radio station.

- User will initiate the sequence for increasing or decreasing the volume.

- The radio will then increase and decrease in volume according to how the user interacts with the volume feature.

3a. User does not interact with the radio for 2 full hours.

- After 2 full hours of the user not changing the station, changing the volume, or changing the frequency, the radio will turn off.

Special Requirements:

- Good sound quality

- UI is simple to understand and use.

Technology and Data Variations List:

Frequency of Occurrence: Infrequent to Continuous. Depends on user.

Open Issues:

- What are the options for users in rural/remote areas?

Supplementary Specification:

When it comes to an alarm clock, the user needs it to be as reliable as possible. So, this is one key feature that will be of the utmost importance to our team as we develop this application. Another key feature is the availability of the application as the user will always want to be able to use the application. Since this is the case, we will be attempting to limit downtime of the application as much as possible.

Glossary:

Alarm- This is a loud sound or noise that will go off at a preset time chosen by the user of the application.

Time- This will be based on a 12 hour rotation and will be in Eastern Standard Time as the developers of the application are based in Eastern Standard Time.

Radio- This is an item that intercepts signals passed around the world from radio towers and then converts them to sounds that will be played through the application. Most likely the radio in this application will be streamed through the internet as computers cannot catch normal radio signals.

AM/FM- This is the variation between the different wavelengths of a radio signal.

Tuner- This is a tool that allows the user to switch between different radio stations.

Volume- This controls the loudness of the sound that will come from the application.

Snooze- As an alarm is active, the user will be able to stop the alarm for a short amount of time (10 minutes) when this is activated.

Display- This feature will show the time, any set alarms, and whether the radio is on/off as well as what radio station is currently playing.

Digital- The time will be featured/displayed in the application as a set of numbers of the decimal system.

Weekday- Refers to the days of the week from Monday through Friday.

Weekend- Refers to the days on the week including Saturday and Sunday.