Team BJJ Deliverable 2

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: Clock 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 a station.
- If this is the station the user wants as the alarm station

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

Frequency of Occurrence: Moderate. 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.

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

Open Issues:

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

Use Case UC3: Setting the Time

Scope: Dual-alarm AM/FM Software

Level: User Goal

Primary Actor: Owner/User of Alarm Clock

Stakeholders and Interests:

- Owner/User: Wants to set time accurately and with ease. Wants time to remain accurate over time.

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

Success Guarantee: User is able to set time with no issues. Time set will work with alarm. Time will remain accurate over time.

Main Success Scenario:

1. User initiates setting the time.

2. User chooses 12-hour clock.

3. User sets the hour.

4. User sets the minute.

5. User chooses AM or PM.

6. Clock/radio keeps the current time.

Extensions:
1a. *Time has already been set.*

- User has the option to initiate and reset the time.
- User has option to set hour, but can skip this.
- User has option to set minutes, but can skip this.
- User has option to set AM or PM, but can skip this.
- User ends setting time.

2a. *User wants to switch to military time.*

- User follows the first step in the main success scenario.
- User chooses 24-hour clock.
- User follows steps 3-6 in the main success scenario.

Special Requirements:

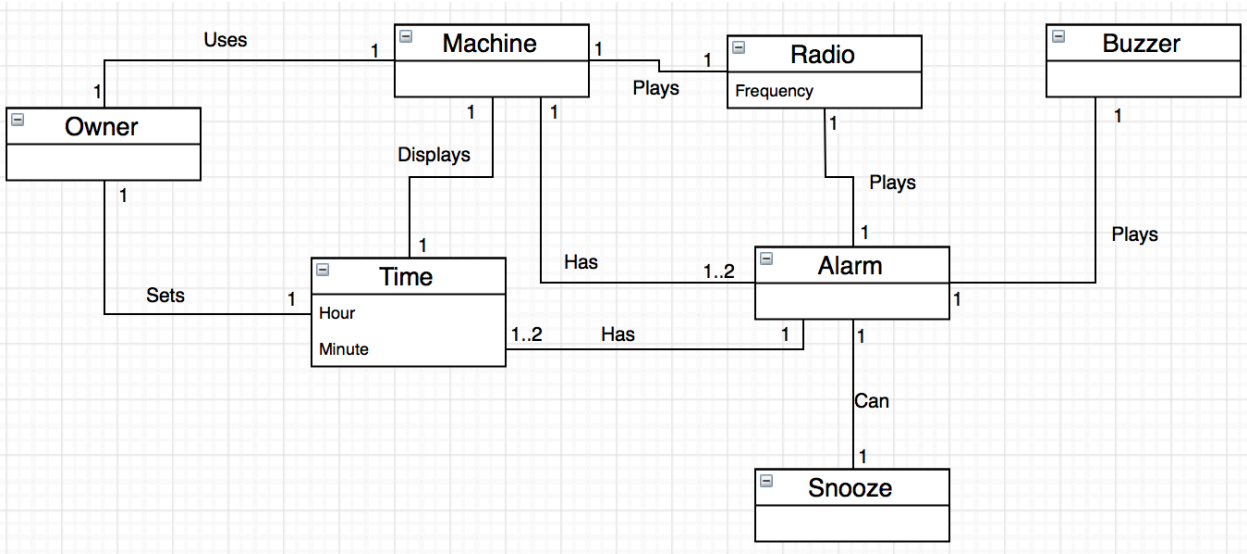
- UI is simple to understand and use.
- Current time should be clearly and accurately displayed.

Frequency of Occurrence: Infrequent. (Assumes power is reliable)

Open Issues:

- How do we guarantee accurate time?

Domain Model



This is just an early domain model that is subject to change. As this model changes, it will be updated on the GitHub page related to this project. This document will also be updated within the final report related to this project.