Glossary

Vision

1. **Introduction**: Having a two alarm system that doubles as an AM/FM radio fills a market need that isn't being adequately addressed at the current time.
2. **Positioning**
    a. Problem Statement: Many users need to have multiple alarms for the day, either because multiple people need their own alarms, or the user has multiple jobs, or even that the user simply has multiple events they need to be alerted for. Having multiple alarms on an alarm clock helps satisfy this need.
    b. Product Position Statement: Our dual alarm clock radio combines the flexibility of a dual alarm system with the convenience of having radio in a style that appeals to the user's sense of taste while being incredibly easy to use
3. **Stakeholder and User Description**
    a. Stakeholder Summary: Anyone who either needs to be on time for multiple event, or needs someone else to be on time for a certain event
    b. User Summary: The average customer will likely represent a person who is employed or sticks to a schedule that requires they show up to a place at a certain time.
    c. Key High-Level Goals and Problems of the Stakeholders: Being on time to an event, having someone else be on time for an event, and a desire to be able to use the radio, be it a song or talk show, as either an alarm or a source of entertainment in the morning.
    d. User-Level Goals: Being alerted at a certain time, and the ability to listen to radio
    e. User Environment: In the bedroom
4. **Product Overview**:
    a. Product Perspective: The product is relatively independent and self-contained, but it does rely on there being active radio stations in order to use some of its functionality.
    b. Assumptions and Dependencies: The alarm will only sound at the correct time if the clock itself is set to a correct time. Additionally, it needs to be constantly supplied with power, or else it can't continue keeping track of the time, and the clock will be off when it's plugged back in. Finally, the radio functionality requires active radio stations in order to play anything other than static.
5. **Product Features**
    a. Displays the time
    b. Allows user to set time
    c. Sounds an alarm at a specified time
    d. Allows user to set alarm time
    e. Plays radio
    f. Allows the user to switch between AM radio and FM radio
    g. Allows user to navigate through different AM/FM stations
    h. Allows the user to connect the radio to the alarm, and play a station at a specified time, allows the user to set the time.

i. Snooze button

Supplemental specifications

Purpose

To create a fully functioning dual alarm clock that has am and fm capabilities.

Usability

1. Set time button
2. Set alarm button
3. Change frequency switch
4. Display for time and frequency

Reliability

The dual alarm clock will go off at the set time as long as it has been set.

Performance

1. Dual Alarms
    a. The user will be able to set two alarms to go off at different times of the day
    b. The user will be able to hit snooze and stop the alarm for a set time
2. Time
    a. As long as the clock is set appropriately it will display the time
3. Radio
    a. The clock can play am and fm stations

Supportability

Due to no internet connectivity updating the software isn't possible

Design constraint

1. lack of internet connection meant the clock can't auto adjust the time.
2. Done in Java

Helpful Definitions

(UI)= User interface
(Am)= Amplitude Modulation
(Fm)= Frequency Modulation
Hardware= physical Components of the clock radio
Stakeholders= everyone directly involved in the product or action.
Primary actor= who is doing the action/ being affected by it
Trigger = what causes the action or event to take place.

Use case 1

Title: Changing the wavelength
Primary actor: User
Goal/Context: Change from Am to Fm frequency

Scope: Clock radio software
Level: Hardware
Stakeholders: the user, everyone listening, broadcaster
Pre-Condition: The desire to change from the lousy Am stations to the Fm stations
Minimal Guarantee: That the radio will change from am to fm
Success Guarantee: You are successful if you change frequencies.
Trigger: the switch that changes between am and fm
Main success scenario: The radio changes from am to fm
Extensions: 1. The switch is broken and doesn't switch the frequencies
Technology and data variations list: varying methods to switch frequencies depending on make.

Use case 2

Title: Setting the alarms
Primary actor: user
Goal/context: make alarm sound at set time
Scope: clock radio software
Level: hardware
Stakeholders: user to be woken up, anyone depending on said user being up on time
Pre-Condition: Both alarms must be set the night before
Minimal Guarantee: the alarms will go off
Success Guarantee: the alarm goes off and wakes up the user
Trigger: the arrival of the set time
Main Success Scenario: the alarm goes off and wakes up the user
Extensions: 1. The alarm doesn't get saved
2. the user changes the time to a new desired time
Technology and data variations list: varying UI's that could affect setting the wake up time.