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<u>AM/FM Dual-Alarm Clock Radio</u>

I. Vision:
    A. Must be able to play the radio, sound two separate alarms, and display the correct current time.

II. Use Case 1:
    A. Name - Setting Alarm Clock
    B. Scope - Alarm Clock System
    C. Level - User Goal
    D. Primary Actor - User
    E. Stakeholders and Interests:
        1. User - Wants to set an alarm so that, at a later time, the alarm clock will activate
        2. Manufacturer - Wants the alarm clock to work correctly to avoid negative feedback
    F. Preconditions:
        1. No more than 2 alarms already set
        2. Alarm clock is already on
    G. Success Guarantees
        1. Alarm clock is set for designated time
    H. Main Success Scenario
        1. User goes to alarm clock with alarm time in mind.
        2. User makes sure the alarm clock is on, turning it on if not.
        3. User sets the alarm clock to alarm-setting mode.
        4. Clock displays previous (or default) alarm time.
        5. User sets the requested time for the alarm.
        6. User exits alarm-setting mode.
    I. Extensions
        1. Alarm clock is unable to turn on
        2. Alarm clock is unable to enter/exit alarm-setting mode
        3. Alarm clock is unable to change time of previously set alarms
        4. Alarm clock shows that an alarm time is set, when, in actuality, it is not
    J. Special Requirements
        1. Visible display for clear setup
    K. Technology & Data Variations List
        1. Input Method - Alarm clock's time-setting buttons
        2. Output Method - Visual display of alarm's set time
    L. Frequency of Occurrence:

           1. Periodic - Activated only when desired, left alone otherwise
- M. Miscellaneous:
    1. Alarm Clock will not automatically change time during daylight savings time
    2. Alarm Clock does not allow for more than two alarms to be set
    3. Sound of alarm clock cannot be changed (only the radio)

III. Use Case 2:
- A. Name - Tuning the Radio to Listen to a Certain Station
- B. Scope - Alarm Clock System
- C. Level - User Goal
- D. Primary Actor - User
- E. Stakeholders and Interests
    1. User: Wishes to listen to a specific station
    2. Radio Host: Broadcasting their program and wants the user to tune in
    3. Manufacturer - Wants the alarm clock to work correctly to avoid negative feedback
- F. Preconditions
    1. Alarm clock must be turned on
    2. Radio must also be turned on
- G. Success Guarantees - The correct radio broadcast is audible
- H. Main Success Scenario
    1. User decides that they wish to listen to a certain radio broadcast
    2. User makes sure the alarm clock is turned on
    3. User turns on the radio feature on the radio
    4. User switched the AM/FM setting to the correct position
    5. User tunes in to the correct station
    6. User listens to the radio broadcast
- I. Extensions
    1. Alarm clock is unable to turn on
    2. Alarm clock will not change radio station
    3. Radio will not tune due to poor connections; possible hardware failures
- J. Special Requirements
    1. Strong enough radio receiver to obtain radio broadcasts
    2. UI/Screen that displays the current radio channel and AM/FM setting
- K. Technology & Data Variations List
    1. Radio frequencies (88 - 108 kHz for FM/535 - 1605 kHz for AM)
    2. Switch for changing AM/FM setting
    3. Dial for changing current channel
- L. Frequency of Occurrence - Could be continuous; however long the User wants

IV. Specs
- A. Shows time

     1. 12 HR/24 HR
     2. AM/PM display
     3. Minutes: 0 minimum; 59 maximum
   B. Change time options
   C. Buttons for Setting Alarm
     1. 2 max; 0 min
   D. Snooze & Turn Off Alarm buttons
   E. Volume Control
   F. Radio power button
     1. Switching between AM/FM
     2. Radio Tuning/Seeking
     3. Preset/Favorite Radio Stations
   G. Clock power button

V. Glossary
   A. When showing time:
     1. 12 HR vs. 24 HR
     2. AM vs. PM
     3. 12 HR Hours: 1 minimum, 12 maximum
     4. 24 HR Hours: 0 minimum, 23 maximum
     5. All Minutes: 0 minimum, 59 maximum
   B. Number of alarms
     1. 0 minimum, 2 maximum
   C. Radio Options
     1. AM vs. FM
     2. AM Stations: 535 - 1605
     3. FM Stations: 88 - 108