

Blaine Billings
Julian Smith
Tyler Newman

System Sequence Diagrams and Operation Contracts

Operation Contracts

- I. Contract CO1
 - A. Operation: getRadioStatus()
 - B. Cross References: SSDs - Tune Radio
 - C. Preconditions: None
 - D. Postconditions:
 - Returns the current status of the radio (on/off)
- II. Contract CO2
 - A. Operation: getStation()
 - B. Cross References: SSDs - Tune Radio
 - C. Preconditions:
 - Radio must be set to a certain station (even if turned off)
 - D. Postconditions:
 - Returns the station that the radio is currently set to
- III. Contract CO3
 - A. Operation: checkStationChange()
 - B. Cross References: SSDs - Tune Radio
 - C. Preconditions:
 - The radio must be turned on
 - D. Postconditions:
 - The user has either chosen up, down, or nothing at all
 - This choice is returned
- IV. Contract CO4
 - A. Operation: increaseStation()
 - B. Cross References: SSDs - Tune Radio
 - C. Preconditions:
 - The radio must be turned on
 - D. Postconditions:
 - The current station is increased by one interval
- V. Contract CO5
 - A. Operation: decreaseStation()
 - B. Cross References: SSDs - Tune Radio
 - C. Preconditions:
 - The radio must be turned on
 - D. Postconditions:
 - The current station is decreased by one interval

- VI. Contract CO6
- A. Operation: `switchTimeFormat()`
 - B. Cross References: SSDs - Change Time Format
 - C. Preconditions:
 - The time is set to either 12 hour or 24 hour time
 - D. Postconditions:
 - The time is switched to the opposite time format than in the precondition
- VII. Contract CO7
- A. Operation: `enterAlarmSetMode(alarmNumber: integer)`
 - B. Cross References: SSDs - Set Alarm Time
 - C. Preconditions: None
 - D. PostConditions:
 - The alarm clock is in alarm-setting mode for the specified alarmNumber
- VIII. Contract CO8
- A. Operation: `setAlarmTime(hours: integer, minutes: integer)`
 - B. Cross References: SSDs - Set Alarm Time
 - C. Preconditions:
 - Alarm clock is in alarm-setting mode
 - D. PostConditions:
 - The time of the previously specified alarm is changed to the inputted time
- IX. Contract CO9
- A. Operation: `exitAlarmSetMode()`
 - B. Cross References: SSDs - Set Alarm Time
 - C. Preconditions:
 - The alarm clock is in alarm-setting mode
 - D. PostConditions:
 - The alarm clock is no longer in alarm-setting mode
- X. Contract CO10
- A. Operation: `enterTimeSetMode()`
 - B. Cross References: SSDs - Set Time
 - C. Preconditions: None
 - D. PostConditions:
 - The alarm clock is in time-setting mode
- XI. Contract CO11
- A. Operation: `setClockTime(hours: integer, minutes: integer)`
 - B. Cross References: SSDs - Set Time
 - C. Preconditions:
 - The alarm clock is in time-setting mode
 - D. Postconditions:
 - The time displayed on the alarm clock is changed to and saved as the inputted time

XII. Contract CO12

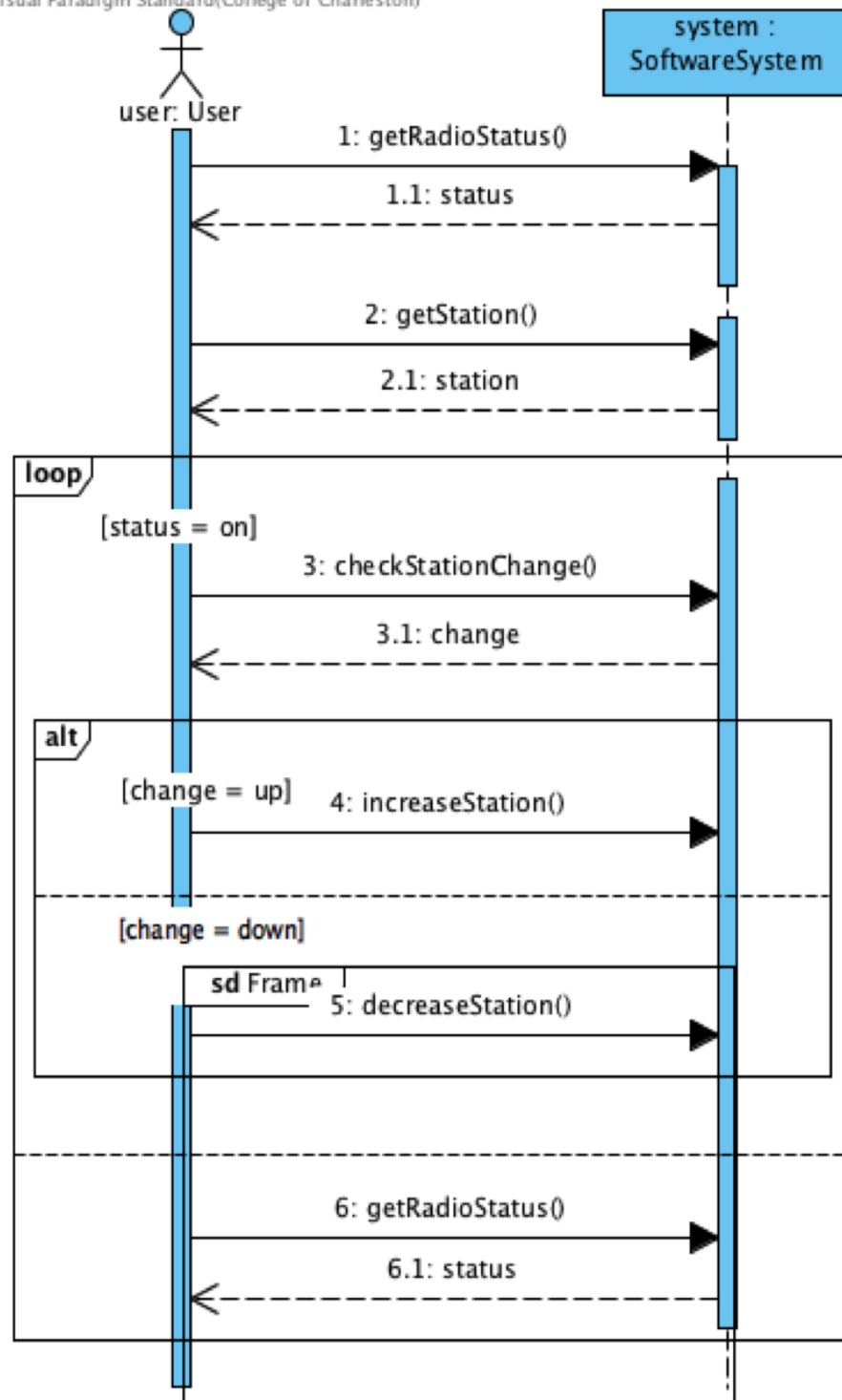
- A. Operation: `exitTimeSetMode()`
- B. Cross References: SSDs - Set Time
- C. Preconditions:
 - The alarm clock is in time-setting mode
- D. Postconditions:
 - The alarm clock is no longer in time-setting mode

XIII. Contract CO13

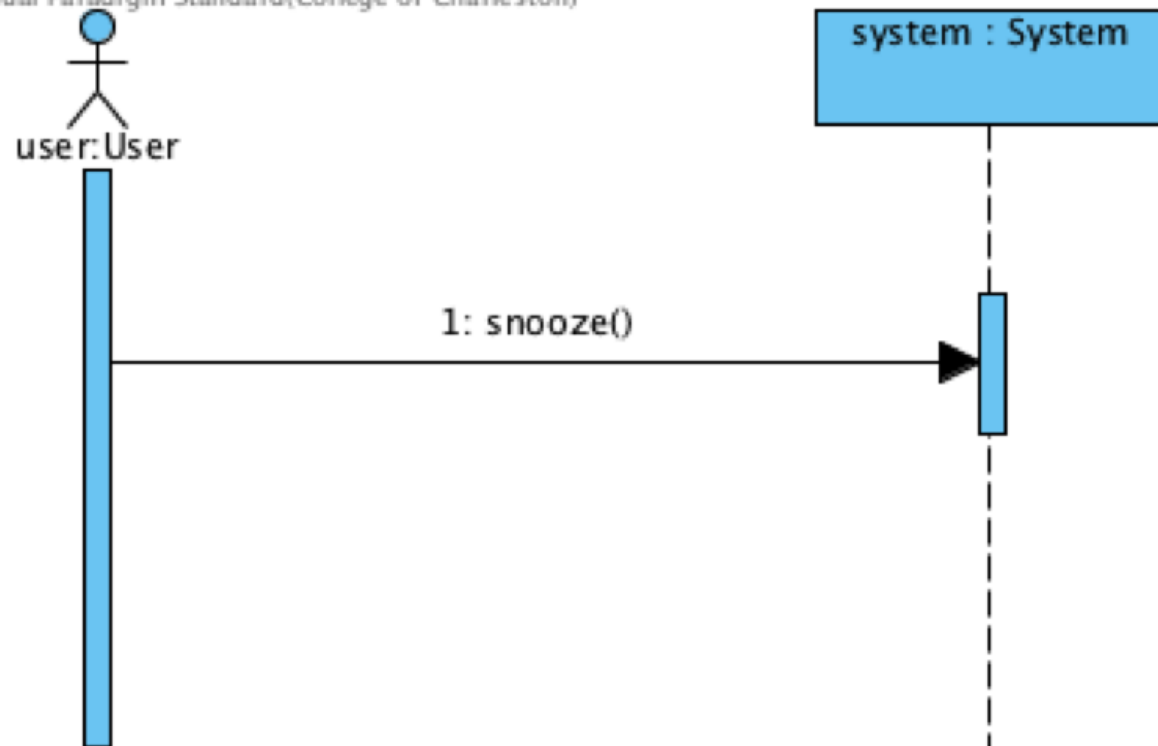
- A. Operation: `snoozeAlarm()`
- B. Cross References: SSDs - Snooze Alarm
- C. Preconditions:
 - There must be an alarm currently sounding
- D. Postconditions:
 - All alarms that were sounding at the time of activation are delayed to go off five minutes later

System Sequence Diagrams

Visual Paradigm Standard(College of Charleston)



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