Team Malaga

Dual-Alarm AM/FM Clock Radio

System Sequence Diagrams

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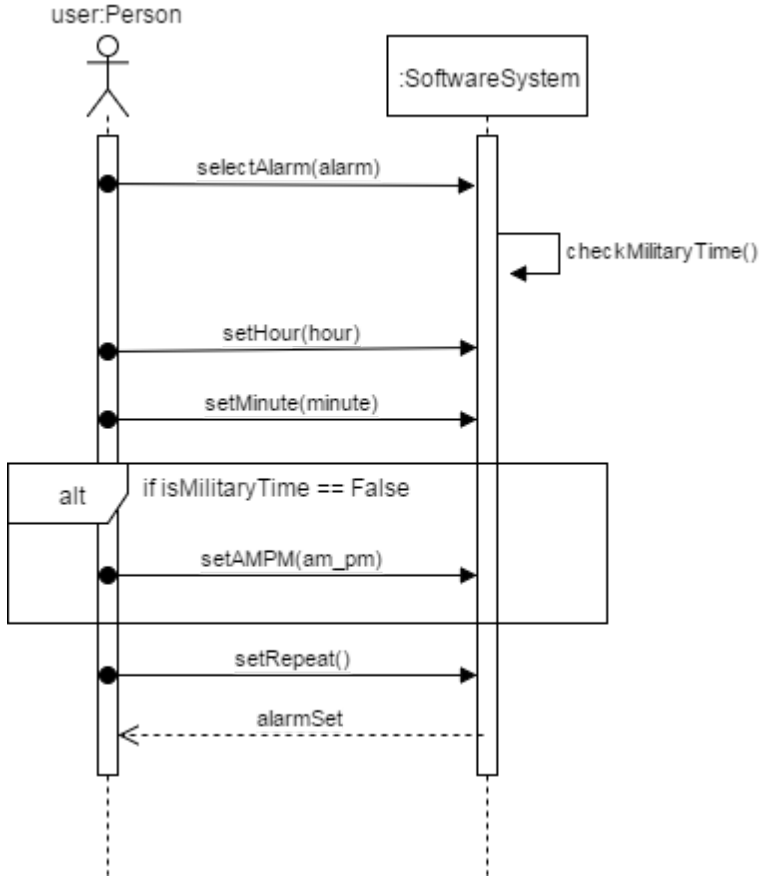
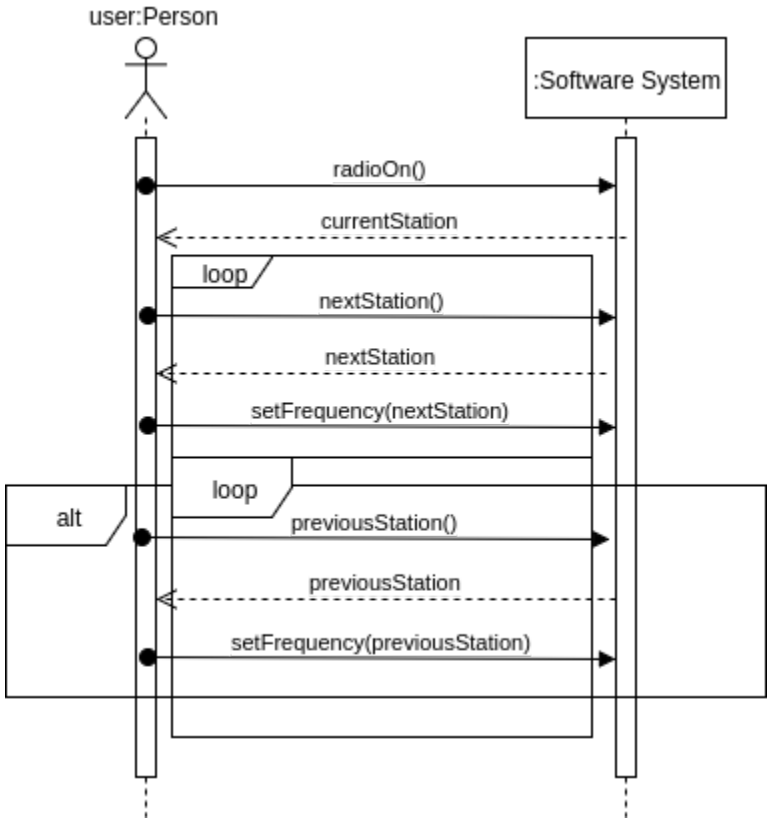
CSCI 360

System Sequence Diagram: Set Alarm



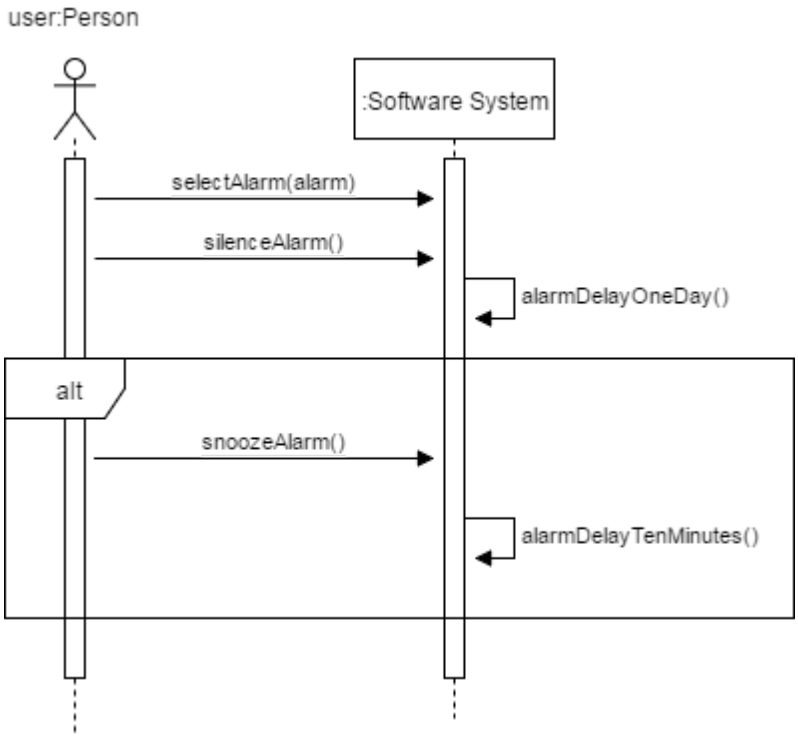
Operation Contracts for SSD: Set Alarm			
Operation	**Cross Reference**	**Preconditions**	**Postconditions**
selectAlarm(alarm)	Use Case 3: Silence Alarm Use Case 4: Disable Alarm	The alarm clock has power.	currentAlarm is set to equal alarm.
checkMilitaryTime()		The alarm clock has power.	Tells the system what time system the clock is currently set as.
setHour(hour)	Use Case 5: Change Clock Time	An alarm has been selected.	The selected alarm's hour has been set.
setMinute(minute)	Use Case 5: Change Clock Time	An alarm has been selected.	The selected alarm's minute has been set.
setAMPM(am_pm)	Use Case 5: Change Clock Time	Military time is equal to False.	The alarm AMPM parameter is set to equal am_pm.
setRepeat()		The alarm clock has power and an alarm has been set.	isRepeat is equal to True. The alarm will now repeat every 24 hours.

System Sequence Diagram: Find Radio Station



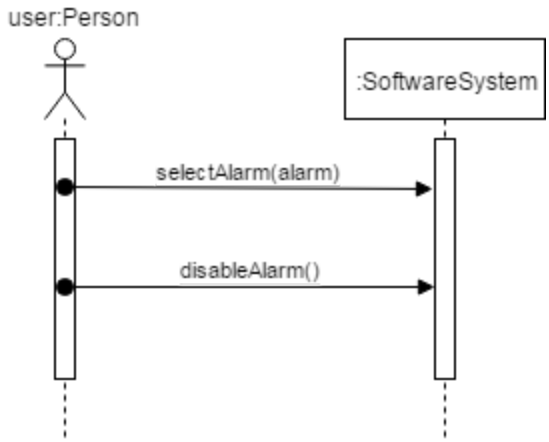
Operation Contracts for SSD: Find Radio Station			
Operation	**Cross Reference**	**Preconditions**	**Postconditions**
radioOn()	Use Case 6: Change Volume	The radio has power and radio stations are broadcasting their signals.	The radio will be on and play. currentStation is set to equal the playing radio frequency.
nextStation()		The radio has power and radio stations are broadcasting their signals.	nextStation parameter is set to the frequency of the next radio station.
previousStation()		The radio has power and radio stations are broadcasting their signals.	previousStation parameter is set to the frequency of the next lowest frequency radio station.
setFrequency(station)		A station has been selected.	The radio plays broadcasts from the selected station.

System Sequence Diagram: Silence Alarm



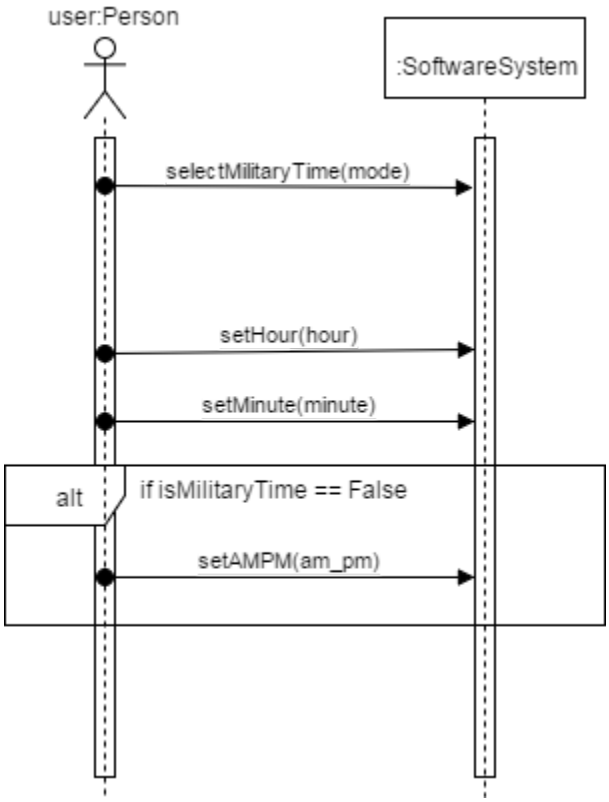
Operation Contracts for SSD: Silence Alarm			
Operation	**Cross Reference**	**Preconditions**	**Postconditions**
selectAlarm(alarm)	Use Case 1: Set Alarm Use Case 4: Disable Alarm	The alarm clock has power.	currentAlarm is set to equal alarm.
silenceAlarm()		currentAlarm is enabled.	currentAlarm is silenced for a period of 24 hours.
snoozeAlarm()		currentAlarm is enabled.	currentAlarm is silenced for a period of 10 minutes.
alarmDelayOneDay()		The silenceAlarm method has been called.	Appends 24 hours of delay to the internal instance variable of currentAlarm.
alarmDelayTenMinutes()		The snoozeAlarm method has been called.	Appends 10 minutes of delay to the internal instance variable of currentAlarm.

System Sequence Diagram: Disable Alarm



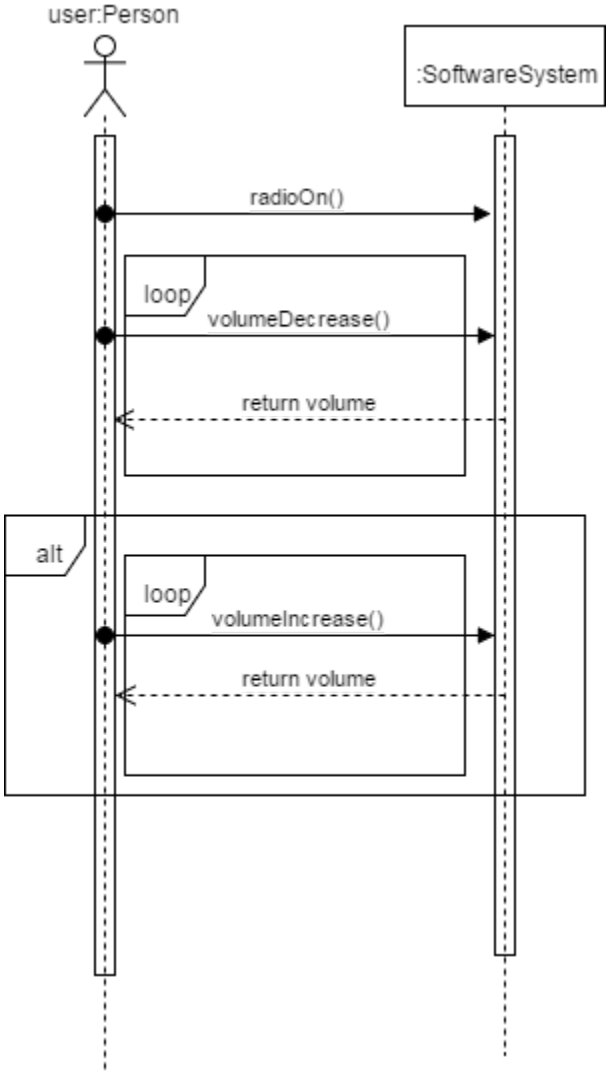
Operation Contracts for SSD: Disable Alarm			
Operation	**Cross Reference**	**Preconditions**	**Postconditions**
selectAlarm(alarm)	Use Case 1: Set Alarm	The alarm clock has power.	currentAlarm is set to equal alarm.
disableAlarm()		currentAlarm is enabled.	currentAlarm has been disabled and will not go off at the time it is set.

System Sequence Diagram: Change Clock Time



Operation Contracts for SSD: Change Clock Time			
Operation	**Cross Reference**	**Preconditions**	**Postconditions**
selectMilitaryTime(mode)		The alarm clock has power.	Tells the system what time system the clock is currently set as.
setHour(hour)	Use Case 1: Set An Alarm	An alarm has been selected.	The selected alarm's hour has been set.
setMinute(minute)	Use Case 1: Set An Alarm	An alarm has been selected.	The selected alarm's minute has been set.
setAMPM(am_pm)	Use Case 1: Set An Alarm	isMilitaryTime is equal to False.	The alarm AMPM parameter is set to equal am_pm.

System Sequence Diagram: Change Volume



Operation Contracts for SSD: Change Volume			
Operation	**Cross Reference**	**Preconditions**	**Postconditions**
radioOn()	Use Case 2: Find Radio Station	The radio has power and radio stations are broadcasting their signals.	The radio will be on and play. currentStation is set to equal the presently playing radio frequency.
volumeIncrease()		Radio is on, volume is not at maximum.	Volume was increased.
voumeDecrease()		Radio is on, volume is not at minimum.	Volume was decreased.