Focus Time

CSC 431 Intro to Software Engineering, Team 14:

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Project Review

- People spend too much time getting distracted by their phones.

- The purpose of this project is to provide the design of a free to download mobile application for assisting the user in staying focused for long periods of time.

- The primary goal of this application is to streamline several popular techniques used to stay focus all in one app!
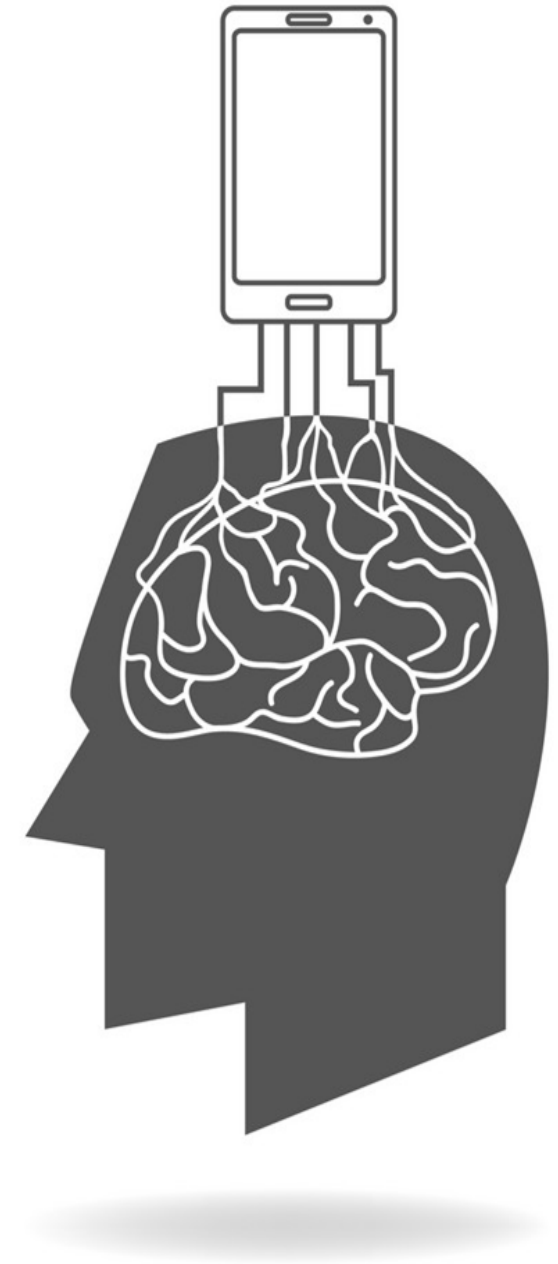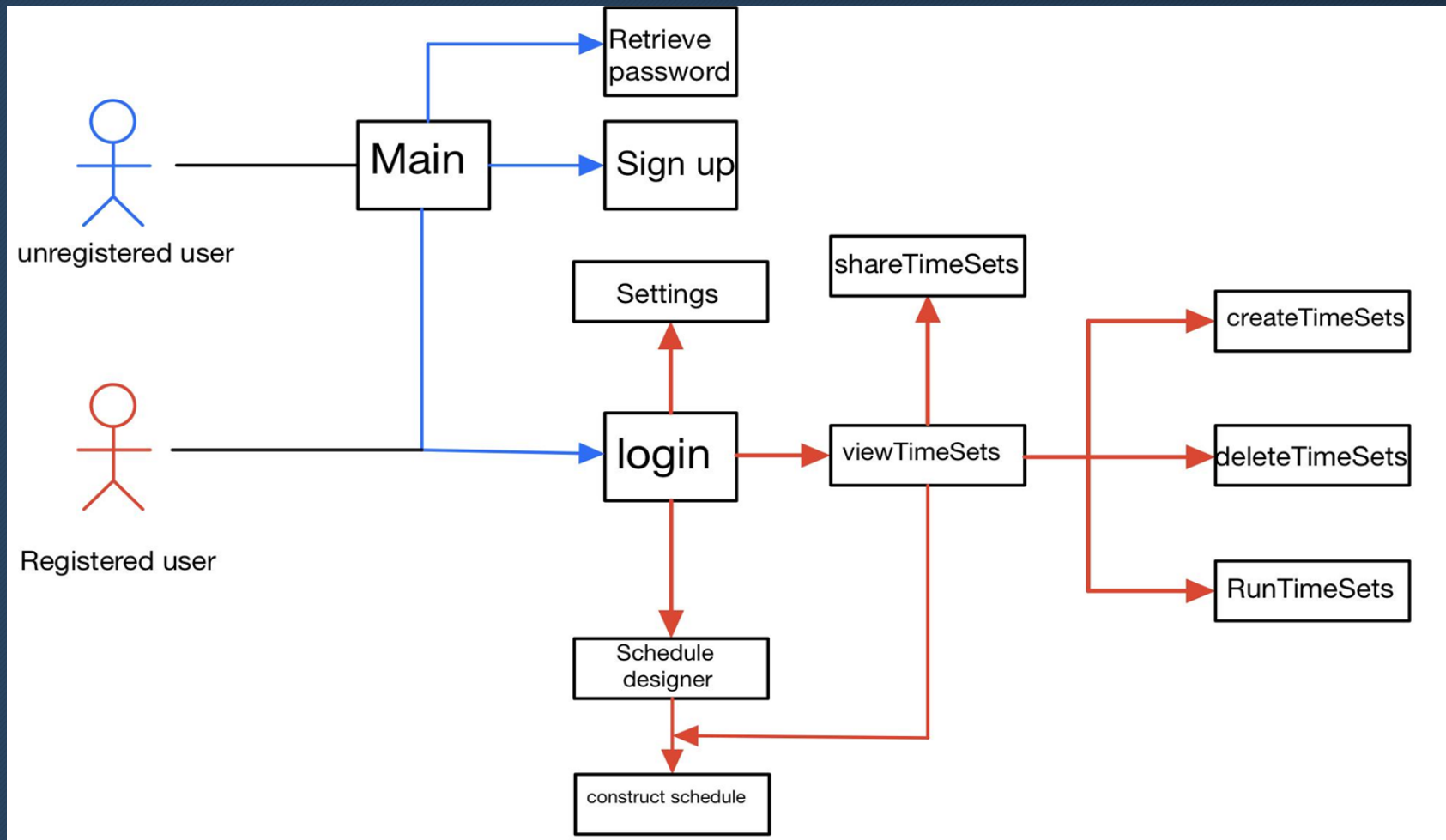
The System

System Overview

- **UI Layer:** Login Form/Registration Form, TimeSet
     This is the user interface which users have access to functional requirements.
- **Service Layer:** TimeSet Manager, Database
     This is the backend system which receive input from user layer and respond with programmed result.

System Diagram

System Actors

1. Student/worker: It is a user(human) type of actor. A user registers on the applications' use interface to access/add/delete/share TimeSets. The user is our primary actor because he/she initiates the interaction of the system.
2. Administrator: it is a system type of actor. This actor, from the external system,is a secondary actor.
3. Time: It is a system clock. It is the time clock of users' mobile devices to monitor the study time of users.
4. Speaker: It is a system speaker. It is the speaker of users' mobile devices to play music during TimeSets.

Design Rational

Architectural Style

- Three-tier architecture style

- Presentation tier: communication

- Application tier: collect information & maintain logic
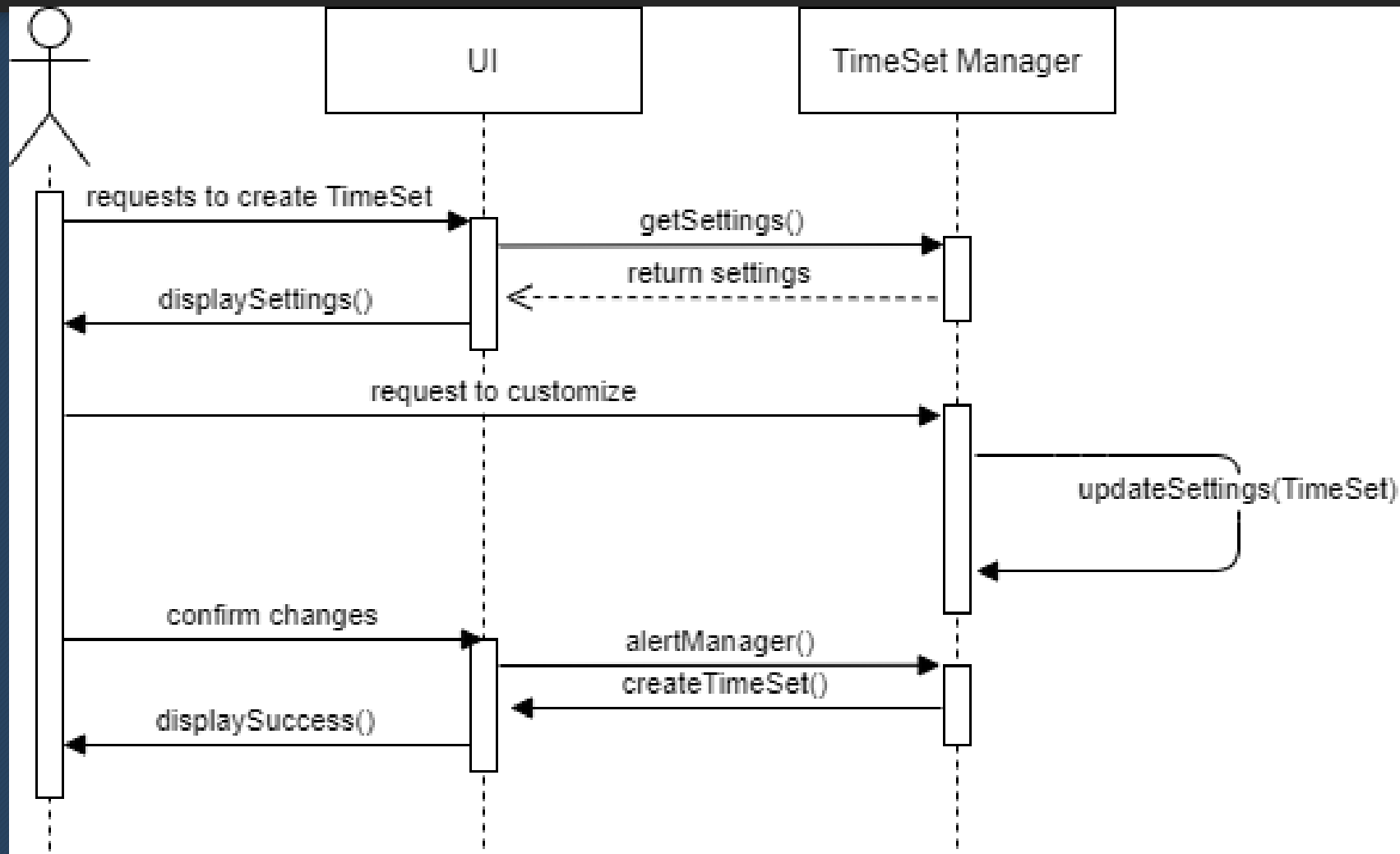
- Data tier: store the data

Design Patterns

- Factory method

- Derived class

- Store data & Encrypt data
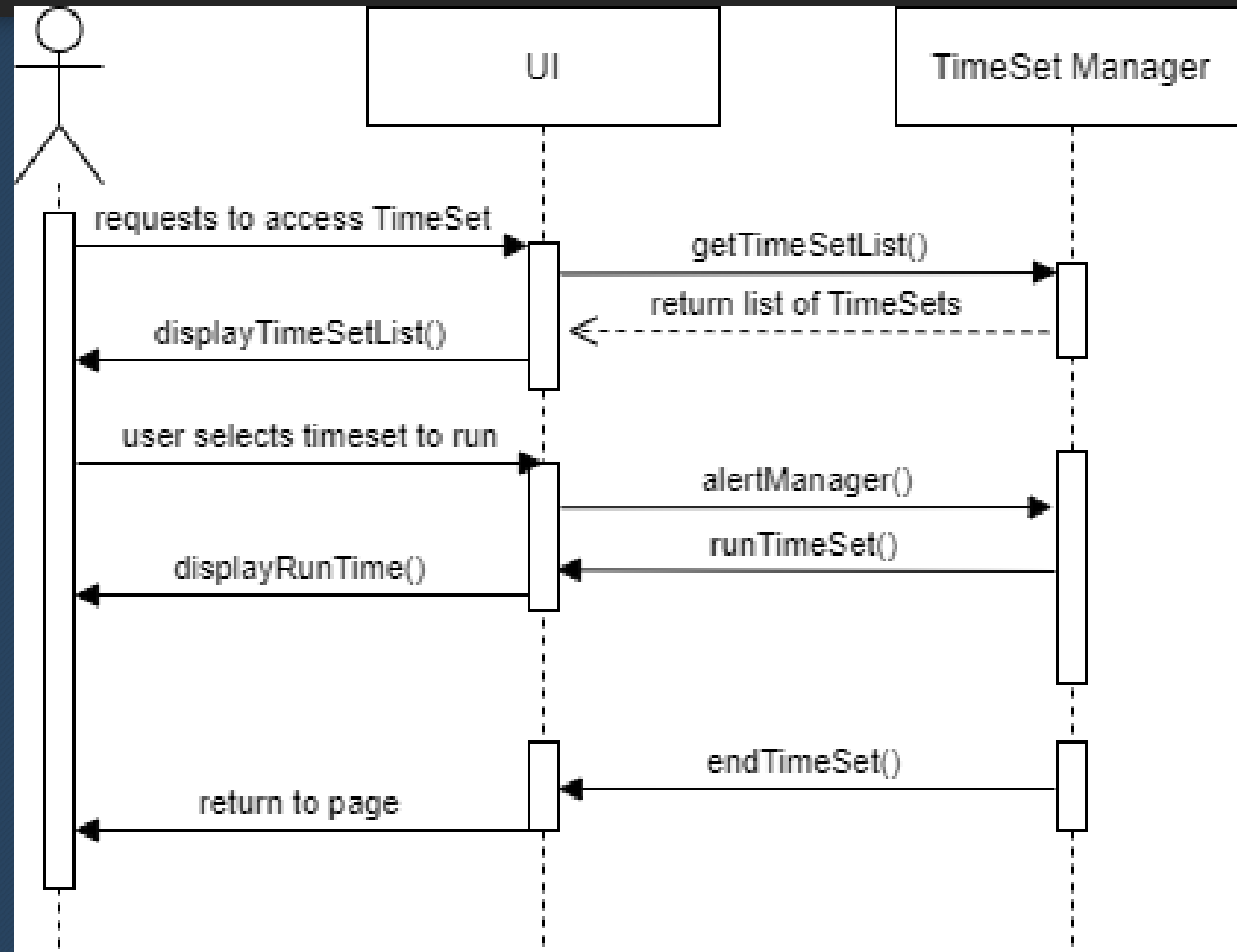
- Mediator control the communication

Framework

- Mobile Framework: Xamarin

- Programming language: C

- Web Framework: Angular UI Grid

- Large datasets

- Grouping, Sorting and Accessing

Functional Design
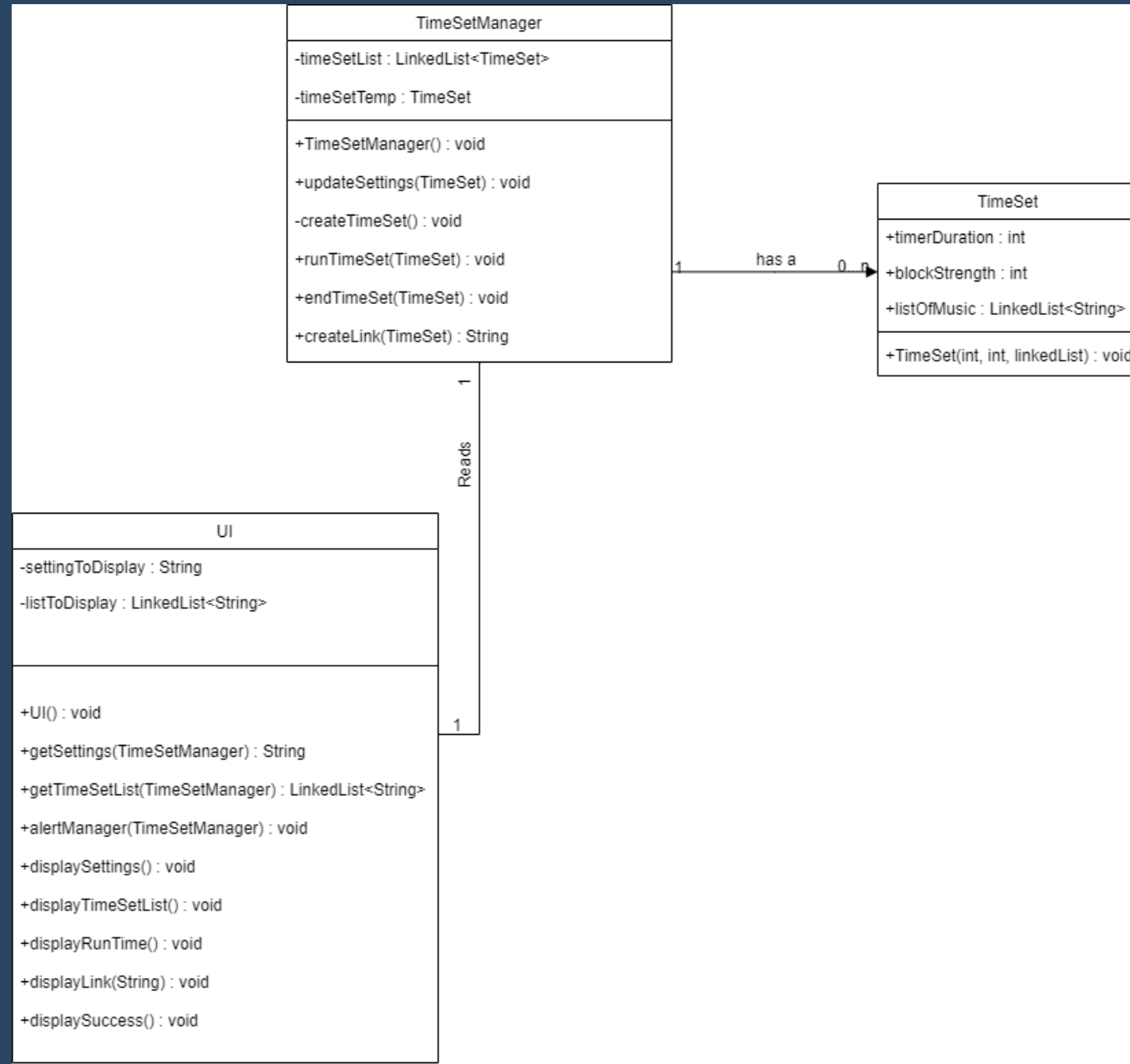
Sequence Diagram 1 (Create TimeSet)

Sequence Diagram 2 (Access TimeSet)

Structural Design

UML Class Diagram (UI, TimeSetManager,TimeSet)

TimeSetManager

-timeSetList : LinkedList<TimeSet>

-timeSetTemp : TimeSet

+TimeSetManager() : void

+updateSettings(TimeSet) : void

-createTimeSet() : void

+runTimeSet(TimeSet) : void

+endTimeSet(TimeSet) : void

+createLink(TimeSet) : String

TimeSet

+timerDuration : int

+blockStrength : int

+listOfMusic : LinkedList<String>

+TimeSet(int, int, linkedList) : void

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UI

-settingToDisplay : String

-listToDisplay : LinkedList<String>

+UI() : void

+getSettings(TimeSetManager) : String

+getTimeSetList(TimeSetManager) : LinkedList<String>

+alertManager(TimeSetManager) : void

+displaySettings() : void

+displayTimeSetList() : void

+displayRunTime() : void

+displayLink(String) : void

+displaySuccess() : void

Mockup

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https://github.com/felipefloresSC/CSC431-Group-Project

Citations

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