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Shift Creator
Team Project – D.3 Analysis
CS 386 – Software Engineering
Spring 2018
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1. Description

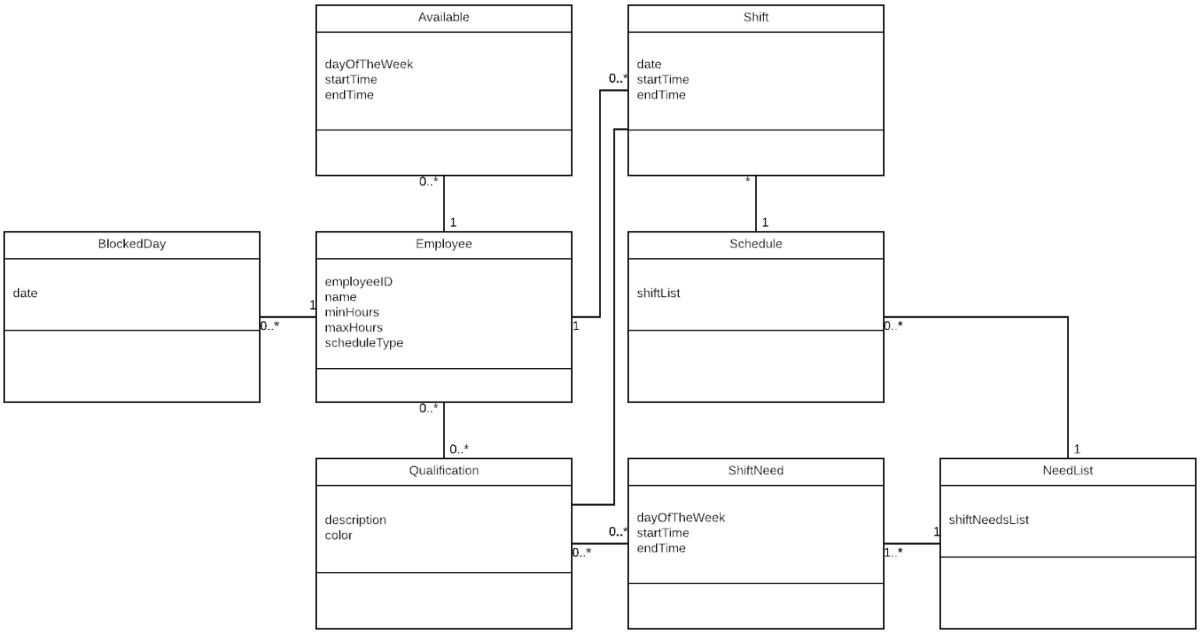
The problem of tediously creating a work schedule for employees affects managers; the impact of which is wasting valuable time trying to create a schedule that works for every employee. For managers who tediously create work schedules for their employees, ShiftCreator is a scheduling app that saves you time by generating your employee schedules for you; unlike other scheduling software, our product works with everyone to create the perfect schedule. ShiftCreator generates the weekly work schedules of multiple employees to save time for the manager and be a more streamlined experience that automatically schedules employees given the necessary information, and if the schedule is not ideal, a new one can be randomly generated in seconds.

Shift creator is designed mainly for use by the manager or designated scheduler for a organization or department. The scheduler starts off by entering the **shift needs** of operation with the *starting* and *ending* time, what *days of the week*, and any *qualifications* required. These **shift needs** are combined by the software into a **needs list** that is used to generate **schedules**. Examples of **qualifications** would be a manager is needed during all hours the business is open or a blood bank certification for laboratory staff working in a blood bank. Since each business is different, **qualifications** can be entered with a *description* as well as a *color* to help them stand out on the final **schedule**.

The scheduler will then enter specific information about each of the **employees** to including their **availability**, *minimum* and *maximum* hours needed, if they can have a *flexible or set schedule*, and any ***qualifications***. Optionally the scheduler can enter **blocked** *dates* for each **employee** for things such as paid time off or other days the employee cannot be scheduled for.

Once all the information for the business is entered, the scheduler can then use ShiftCreator to generate several suggested **schedules** for review. Schedules will be displayed by date with employee, *start time, end time, and qualifications* with each of the **shifts** displayed. Any **shifts** meeting the **qualification** requirements will be displayed shaded in their chosen color. In none of the **schedules** are close to what is desired, another set of **schedules** can be produced. Once a **schedule** that is acceptable is found, and minor modifications can be made, such as switching employee **shifts** or modifying a shifts hours. Once the **schedule** is set, scheduler can then create a PDF of the schedule for display or distribution. After the **schedule** is posted, the scheduler can make any modifications needed such as swapping employees assigned to **shifts** and creating or removing **shifts**.

2. Model



3. Group Participation

Nicholas Anderson - Contributed to UML diagram, and D3 part 1. Worked on find persistent data storage for webapps. 25%
Carli Martinez - Contributed to UML diagram discussion and began setting up files on Github for web with stylesheet and javascript files. 25%
Brandon Thomas - Weekly report, contributed to UML diagram discussion. 25%
Ryan Wallace - Lead the first group meeting and worked on the beginning description by pulling it from our previous work. 25%