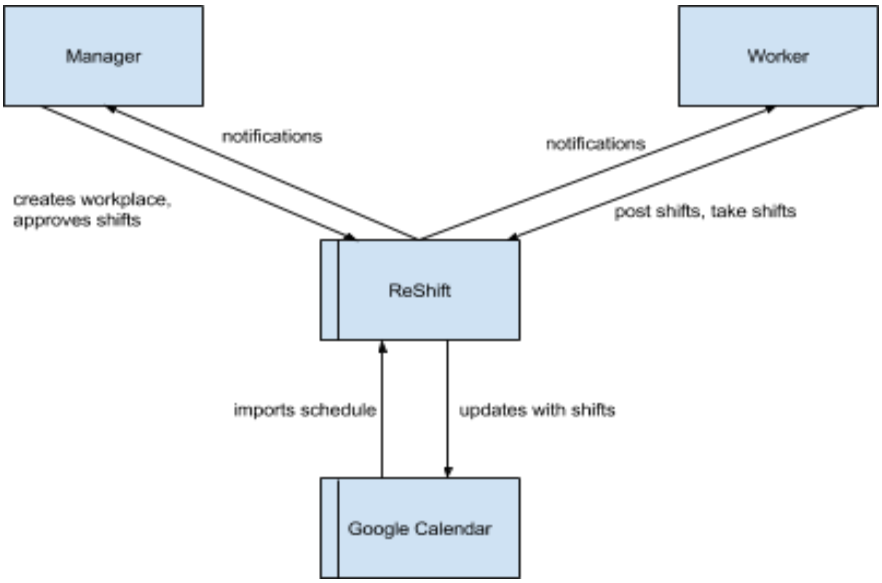
6.170 Project 3: ReShift

ReShift is a web app that allows various campus jobs efficiently handle changes in shift availability. The app creates a workplace that have workers and managers. Each worker has his/her usual shift, but if the worker cannot make their shift for a night because of a meeting or class, they can offer the shift up for others to pick up and do. The web app makes it more efficient to offer and pick up hours.
It supports creation of workplaces, offering and picking up of shifts, notifications of available shifts and calendar integration.

Purposes of ReShift are:

1. **Efficiently allow users to manage shift changes.** In particular, ReShift is trying to make the hassle of finding people to cover shifts simplier for those people must miss their usual hours. The app will allow users to post available job shifts in one centralized location and allow users to receive notifications about the shift. Once the shift is taken, all others will be notified. This allows the change in workers to be seen easily, facilitating a smooth change to a tedious task.
2. **Allow managers to view changes that the workers agree to.** ReShift will provide an interface so that the manager can view who will be working a given shift and will be updated whenever the workers choose to give one up. Also, will allow the manager to post extra shifts that are available during holidays or during summer session.
3. **Extension: Generalize the application to be used for other shift managing tasks such as events.** ReShift could be used as a uniform way for leaders or event coordinators to assign shifts for an event and then allow the workers to rearrange themselves to the hours that are most convenient for them.

Context:



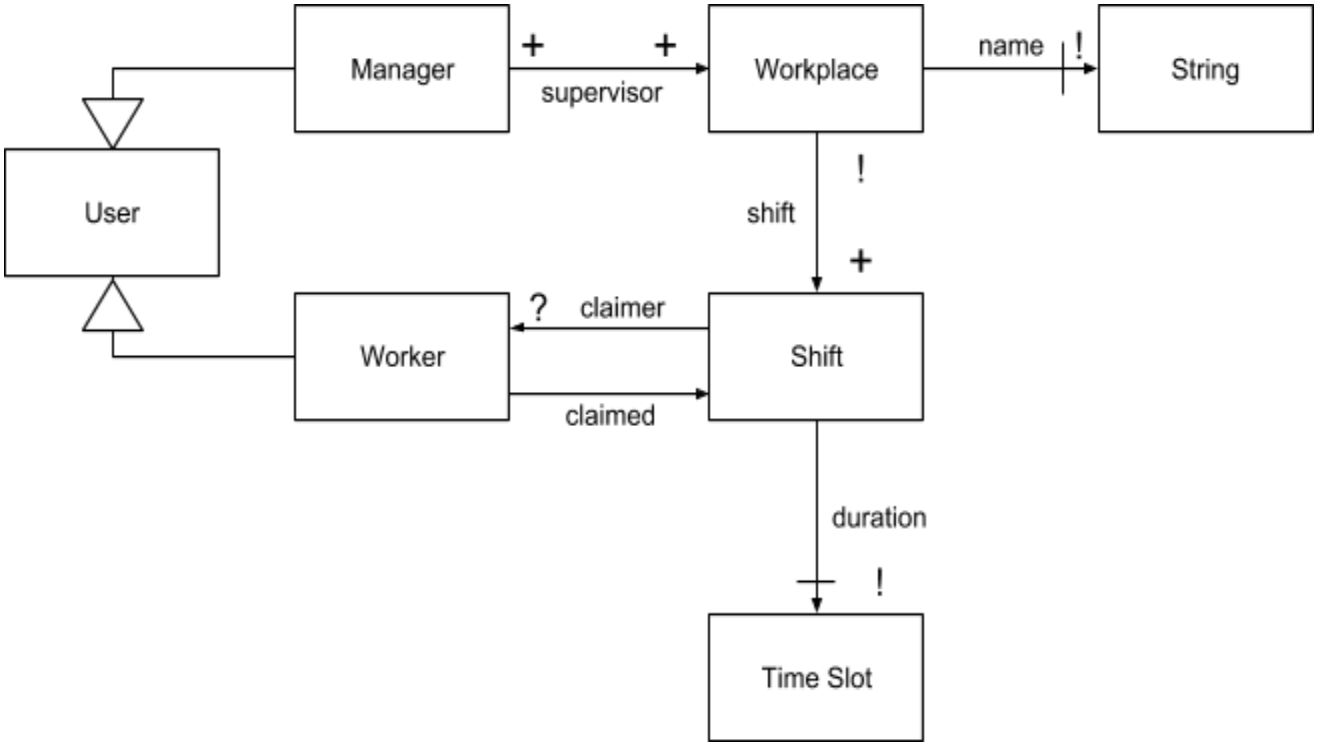
Concepts:
Workplace: A place of employment that has manager(s) and worker(s). A workplace has a set of shifts that are worked each week.The workplace will be given a name by the manager that creates it to help distinguish it from other workplaces.

Shift: An amount of time that must be manned by an worker at his/her workplace. The shift must have time slot with a start time and a duration.

Posting: Workers that cannot attend their assigned hours can “post” the shift they would like to have covered. This is making the shift available to other workers to cover.

Covering: Workers who are available for the duration of a shift can “cover” the shift, meaning they will work the hours. This is a commitment by the worker to be at the shift for poster.

Data Model:



Design Challenges:

Are managers allowed to be workers? For situations, the manager may be considered a manager or a manager may have to work a shift.

Potential Solutions:

- *Allow managers to have fields of workers* -- Build the data model to include the worker fields and easily allow the manager to claim shifts if desired.
- *Force manager to create a worker account* -- Simplifies the logic for the manager model.

Are workers allowed to post a shift that they said they'd cover? This is the situation that a worker said that they would cover a shift for another worker, but later determined that they would not be able to cover it.

Potential Solutions:

- *Treat the shift as before* -- Simply allow the shift to be able to go to posts as before. This would allow the app to have flexibility in handling shifts until someone can pick up the hours.
- *Force the shift coverer to keep it* -- This would be a way to maintain the integrity of covering. Rather than being able to post a shift you said you'd cover, the app would enforce it and whatever punishment would go to the coverer.