**Introduction & Context**

Our community is full of people eager for a chance to make some money through various tasks, such as lawn mowing, leaf raking, and snow shoveling. There is also a large population of people who are extremely busy and are willing to pay to have these types of tasks performed for them. Unfortunately, many of the people willing to pay somebody to complete these tasks are disconnected from the population willing to perform them.

This application aims to connect these two populations. The system will allow homeowners to post their jobs to a job board. Workers can create an account, view jobs posted on the job board, and can bid on jobs they would like to perform. Homeowners will have the option to view all bids placed on their job and choose the worker they would like to perform the work.

A review system helps connect homeowners to trustworthy and dependable workers, and workers to honest and equitable homeowners. The bidding system helps prevent workers from being undercompensated while also helps keeping prices reasonable.

**Requirements**

**Functional Requirements**

1. Authentication and Access
   1. A user must authenticate using an email address and password before gaining access to the system.
      1. A user must be able to create a new account by providing an email address and password. The user must also provide:
         1. A preferred contact method (Email, Phone)
         2. A phone number (if phone preferred)
         3. For Customers - An address
      2. For future logins, if a user enters an incorrect email address/password combination, they must be allowed to attempt another login.
   2. A user must be categorized as one of the following types:
      1. Customer
      2. Worker
      3. Owner
2. User Account (all permissions premised on authentication)
   1. Account Settings
      1. Any User must be permitted to modify their own email address.
      2. Any User must be permitted to modify their own password.
      3. Any User must be permitted to modify their contact information.
      4. Any User must not be allowed to modify the email address/password of another user.
      5. A User must not be allowed to modify their account type.
   2. Account Balance
      1. Any User must be allowed to view the balance of their account.
      2. Any User must be allowed to deposit money into their account.
      3. Any User must be allowed to withdraw money from their account.
3. Customer Profile (all permissions premised on authentication)
   1. Account Settings
      1. A Customer must be permitted to modify their physical address.
      2. A Customer must be permitted to blacklist Workers from acquiring a job posted by the Customer.
   2. Post Jobs
      1. A Customer must be permitted to create and post jobs for Workers to acquire.
         1. A job must be categorized
         2. A job must include an expected time to completion for the job.
         3. A job must include a desired completion window for when the job can be performed.
      2. A Customer must be notified when a Worker claims a job they have posted.
      3. A Customer must be permitted to approve or decline Workers that have placed a bid on the Customer’s job.
         1. Payment must happen from Customer to Owner at this time.
   3. Updating Jobs
      1. A Customer must be able to change the details of the job if it has not been claimed.
      2. A Customer must not be able to change the details of the job if they have already approved a Worker to perform the job.
   4. Paying Workers
      1. A Customer must be notified when one of their jobs is completed.
      2. A Customer must be permitted to add gratuity to their payment of a Worker.
         1. Transferred directly to worker at time of approval.
   5. Filing Complaints
      1. A Customer must be permitted to file a complaint/request for reimbursement with the site Owner.
         1. A Customer must be permitted to upload an image along with their reimbursement request.
      2. A Customer must be notified if/when they are reimbursed.
   6. Leaving Review
      1. A Customer must be able to review a Worker after the Worker has completed the job.
         1. The Review must have a rating out of 5 stars
   7. A Customer can cancel any job up to 24 hours before the start time of the job.
      1. Payment is transferred from the owner back to the Customer at this time.
4. Worker Profile (all permissions premised on authentication)
   1. Account Settings
      1. A Worker must be permitted to blacklist Customers.
   2. Claim Jobs
      1. A Worker must be able to view available jobs.
         1. A Worker must be able to filter jobs based on zip code.
      2. A Worker must be able to bid on jobs they would like to work.
         1. When bidding on a job, a Worker must define a time they will begin the job.
         2. The time the Worker will begin the job must allow the Worker to complete the job in the expected time before the end of the Customer’s defined window.
         3. When bidding on a job, a Worker must also define the wage that they will accept. This can be different than the proposed wage by the Customer.
      3. A Worker must be notified when a job that they have claimed has been approved by the Customer.
      4. A Worker must not be permitted to claim more than one job if jobs overlap time ranges.
   3. Complete Jobs
      1. A Worker must be able to mark accepted jobs as complete.
      2. A Worker must be permitted to fill out a survey regarding details about the job.
         1. The survey must include the degree of complexity of the job (relative to expectation)
         2. The survey must also include the duration of the job (relative to the expected duration).
   4. Cancelling Jobs
      1. A Worker must be permitted to cancel jobs up to 48 hours before the job is scheduled to begin.
         1. If a job is cancelled by a Worker, the job must be reposted with the original details the Customer provided.
      2. A Worker must not be permitted to cancel jobs once there are fewer than 24 hours until start.
5. Owner Profile (all permissions premised on authentication)
   1. Site Settings
      1. An Owner must be permitted to change the commission they receive from each job (system default is 10%).
      2. An Owner must be permitted to deactivate Worker and Customer accounts.
   2. Complaints/Reimbursements
      1. An Owner must be permitted to review complaints submitted by Customers.
      2. An Owner must be permitted to reimburse Customers if their complaint warrants reimbursement.
   3. Job Categories
      1. An Owner must be able to create new job types.

**Non-Functional Requirements**

1. The application must use a database.
   1. The database must store all information about a User, including but not limited to:
      1. Email Address
      2. Password
      3. Phone Number
      4. Account Type
      5. Physical Address (for Customers)
      6. Workable zip codes (for Workers)
   2. The database must also store all information necessary for tracking jobs, including but not limited to:
      1. Category
      2. Estimated time to completion
      3. Desired completion window
   3. The database must also store all information necessary for supporting the other functions of the application.
2. The team must use GitHub and its associated Project features to implement new changes and manage versions of the project.
   1. Members of the team must submit pull requests which are reviewed by the team in meetings before merging with the main branch.
3. The application must be deployable to the web.
4. The application’s user interface must support mobile traffic.

**Future Features**

The following features are features that may not be implemented upon deployment, but that would enhance the usability of the application substantially.

1. Workers could have a cancellation rate statistic on their profile, which is computed based on a simple ratio between the amount of jobs they’ve cancelled and the amount of jobs they’ve been approved for by a Customer.
2. Customers could have a similar statistic on their profile to define the percentage of jobs that they’ve created and have eventually cancelled.
3. The system could support and enhanced bargaining feature, allowing both Customer and Worker to propose more than one wage for any given job.
4. The system could support a more robust review and rating system for both Workers and Customers.
5. The system could require a Customer to put in the details of their job (size, incline, conditions, etc.) to help the system predict an anticipated completion time, rather than relying on a Customer to accurately estimate the time.

**Glossary**

*User:* A User is defined as any user in the system, whether they be Customers, Workers, or Owners. Each user type has different access rights, but some features are accessible to Users regardless of type.

*Customer:* A Customer is defined as any user in the system that has created an account of type Customer. These Users utilize the app exclusively for posting jobs, not completing them.

*Worker:* A Worker is defined as any user in the system that has created an account of type Worker*.* These Users utilize the app exclusively for bidding on jobs and completing them.

*Owner:* An Owner is the superuser of the system. The Owner administrates the application, oversees system activity, and is the only User authorized to make inherent changes to the system. The Owner is the middleman for all transactions, and also withholds a portion of all transactions as a commission for facilitating the arrangement.