**5.3 Specific Requirements**

**5.3.1 External Interfaces**

|  |  |
| --- | --- |
| 1. Name of Item | Login |
| 1. Description of Purpose | This will allow the user to login to the system |
| 1. Source of input or destination of output | Login.php |
| 1. Valid range, accuracy, and/or tolerance | 100% Accuracy, Zero Tolerance |
| 1. Units of measure | Text |
| 1. Timing | N/A |
| 1. Relationships to other inputs/outputs | Successful login grants access to Offer Trips, Schedule Trips, View/Edit Profile, Account Recovery |
| 1. Screen formats/organization | Desktop, mobile friendly |
| 1. Window formats/organization | N/A |
| 1. Data formats | PHP, MYSQL |
| 1. Command formats | N/A |
| 1. End messages | Login Successful/Unsuccessful |

|  |  |
| --- | --- |
| 1. Name of Item | Register |
| 1. Description of Purpose | This will assign a user account to a user. |
| 1. Source of input or destination of output | Signup.php |
| 1. Valid range, accuracy, and/or tolerance | 100% Accuracy, Zero Tolerance |
| 1. Units of measure | Text |
| 1. Timing | N/A |
| 1. Relationships to other inputs/outputs | Grants access to Login.php |
| 1. Screen formats/organization | Desktop, mobile friendly |
| 1. Window formats/organization | N/A |
| 1. Data formats | HTML, PHP |
| 1. Command formats | N/A |
| 1. End messages | Registration Successful -> Activation Link in Email |

|  |  |
| --- | --- |
| 1. Name of Item | Account Recovery |
| 1. Description of Purpose | This will reset password for user. |
| 1. Source of input or destination of output | Forgotpassword.php |
| 1. Valid range, accuracy, and/or tolerance | 100% Accuracy, Zero Tolerance |
| 1. Units of measure | Text |
| 1. Timing | N/A |
| 1. Relationships to other inputs/outputs | Successful recovery grants access back to user account |
| 1. Screen formats/organization | Desktop, mobile friendly |
| 1. Window formats/organization | N/A |
| 1. Data formats | HTML, PHP |
| 1. Command formats | N/A |
| 1. End messages | Activation Link Sent To Specified Email |

|  |  |
| --- | --- |
| 1. Name of Item | Offer Trips |
| 1. Description of Purpose | This will allow the user to offer trips |
| 1. Source of input or destination of output | AddTrips.php |
| 1. Valid range, accuracy, and/or tolerance | 100% Accuracy, Zero Tolerance |
| 1. Units of measure | Text |
| 1. Timing | N/A |
| 1. Relationships to other inputs/outputs | Updates Database |
| 1. Screen formats/organization | Desktop, mobile friendly |
| 1. Window formats/organization | N/A |
| 1. Data formats | HTML, PHP |
| 1. Command formats | N/A |
| 1. End messages | Add trip successful |

|  |  |
| --- | --- |
| 1. Name of Item | Schedule Trips |
| 1. Description of Purpose | This will allow the user to search trips |
| 1. Source of input or destination of output | Index.php |
| 1. Valid range, accuracy, and/or tolerance | Accuracy based on driver availability |
| 1. Units of measure | N/A |
| 1. Timing | N/A |
| 1. Relationships to other inputs/outputs | Updates Database |
| 1. Screen formats/organization | Desktop, mobile friendly |
| 1. Window formats/organization | N/A |
| 1. Data formats | HTML, MYSQL, Google Maps API |
| 1. Command formats | N/A |
| 1. End messages | Show query of desired trips and drivers |

|  |  |
| --- | --- |
| 1. Name of Item | View/Edit Profile |
| 1. Description of Purpose | This will allow a user to make changes to his/her profile. |
| 1. Source of input or destination of output | Profile.php |
| 1. Valid range, accuracy, and/or tolerance | Accuracy dependent on user provided information |
| 1. Units of measure | N/A |
| 1. Timing | N/A |
| 1. Relationships to other inputs/outputs | Updates Database |
| 1. Screen formats/organization | Desktop, mobile friendly |
| 1. Window formats/organization | N/A |
| 1. Data formats | HTML, MYSQL |
| 1. Command formats | N/A |
| 1. End messages | Profile updated successfully |

**5.3.2 Functions**

The system shall (for Login):

1. Perform necessary validity checks on inputs
2. Call login process form, which will then query database. Upon successful query, user is directed to profile page.
3. If abnormal situation, generate generic error to notify user login is not functioning.
4. Login parameters will be verified with database
5. Upon proper input, grant access to all features of the website including: scheduling trips, offering trips, view/edit profile, account recovery.

The system shall (for Register):

1. Perform necessary validity check on register form
2. Call activation email process. Once account is activated, update database to reflect this to allow access to all website features.
3. If abnormal situation, generate generic error to notify registration is not functioning.
4. Registration form parameters will be verified with database
5. Upon proper input, activate user account

The system shall (for Account Recovery):

1. Perform necessary validity check on email form
2. Call reset password process. Once called, send email to user’s account email to reset password. Once linked is clicked, allow password to be reset.
3. If abnormal situation, generate generic error to notify account recovery is not functioning.
4. Recovery form parameters will be verified with database
5. Upon proper input, reset user password

The system shall (for Offer Trips)

1. Perform necessary validity check on adding trip
2. Push to database with added trip, add to database, display success to user.
3. If abnormal situation, generate generic error to notify offering trips is not functioning.
4. Location parameters will send information to database regarding trips being added.
5. Offering trips will make changes to the data stored in the database

The system shall (for Schedule Trips)

1. Perform necessary validity check on user query
2. Call from database the query, display allocated trips to the user
3. If abnormal situation, generate generic error to notify querying trips is not functioning.
4. Starting and ending destination parameters will send information to database to aid in querying relevant trips.
5. Query will change content of webpage.

The system shall (for View/Edit Profile)

1. Perform necessary validity checks
2. Call to database to obtain user profile information. Push to database if user makes changes to profile.
3. If abnormal situation, generate generic error to notify querying trips is not functioning.
4. Profile form parameters will serve as both push and call from database.
5. Profile query will change content of webpage.

**5.3.3 Performance Requirements**

a) The website should be able to be run on any modern browser, including, but not limited to: Google Chrome, Firefox, and Safari.

b) The database should be able to support up to one hundred users in testing phase. When website goes live, database and server should be updated regularly to handle request requirements.

c) The amount and type of information to be handled will mainly be HTML, PHP, CSS, JavaScript, and Google APIs.

**5.3.4 Logical Database Requirements**

a) The types of information to be used by various functions will be: INT, VARCHAR, DATE, and other MYSQL supported datatypes.

b) The information will be accessed frequently.

c) The user will indirectly access the database through HTML and underlying PHP code.

d) A users table should be able to add many trips and schedule many trips. There should be a one-to-many relationship for most tables in the database.

e) A user should not be allowed to access the database directly, only indirectly.

f) Data must be retained until user account is inactive for 180 days.

**5.3.5 Design Constraints**

This website should be modern and able to run on any modern-day web browser. The minimum hardware limitations will match those set for the client’s web browser.

**5.3.5.1 Standards Compliance**

a) Report format:

- This website is to have database logs for all transactions done on the website for 365 days.

b) Data naming:

- This website is expected to encrypt all critical data.

**5.3.6 Software System Attributes**

**5.3.6.1 Reliability**

This website should be expected to continue operation year-round, only ceasing operation for routine maintenance.

**5.3.6.2 Availability**

This website should be able to be rebooted from server if need be. All user data should be kept on the database for 180 days incase of the need of a checkpoint or restore point.

**5.3.6.3 Security**

This website should protect all user critical data with MD5 encryption level hashing.

**5.3.6.5 Portability**

This website should be able to run on any system as long as the browser is supported by the website.

**5.3.7 Organizing the Specific Requirements**

**5.3.7.1 System Mode**

This website should have a guest mode for those who are not website users. Functionality in this mode is limited with only the ability to see trips, but not see which driver is providing these trips. This website should also have a user mode which will unlock all functionality of the website.

**5.3.7.4 Feature**

This website should have SMTP push email features in order for login, account recovery, and profile pages to function effectively. There should also be a contact us form if the user needs assistance.

**5.3.7.7 Response**

The Google Maps API feature of the website will be reliant on data entered by users who are offering rideshare services to other users. The activation and recovery emails are response functions based on what the user enters into the respective webpages.