**REVISION-2**

**Product Requirements**

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| **Team** | Team 1: ‘The D Is Silent’ (Team Account: s261-05a) |

# **Brief problem statement**

We are a small group of individuals known as Team 1. Our goal is to develop lucrative and innovative solutions to problems people face in their daily lives. In this case, the product we wish to develop is called Tool Share, which is a database and program designed to help neighbors cooperate for the sake of sharing and borrowing items that they input into the database.

# **Stakeholders**

**Investiny Corp.** The group paying for the development of Tool Share.

**Development Team** The software developers responsible for the development and deployment of Tool Share.

**End Users** The members of communities nationwide who will be using the software to their benefit and the benefit of their neighbors.

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# **Users profile**

The target user must:

- Have basic knowledge of how to use a GUI

-Know how to use the web

-Have basic knowledge of databases

-Be willing to lend and borrow their belongings

# **System requirements**

Browser Compatability:

- Chrome ( v30+ )

- Mozilla Firefox ( v20 - 27+ )

Web Interface:

Sharp, Easy to use and clean UI

* Responsive system built without additional plugins
  + No JQuery
  + No external Java
  + No custom fonts
  + Limited use of static images or external/internal content
* Theming all designed in CSS

The backend of this project is to be programmed largely in Python and Django, as well as either SQL or SQLite. All of this must be accessible over the web so that a community could potentially use it.

# **Feature requirements (user stories)**

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| **No.** | **User Story Name** | **Description** | **Release** |
| **1** | Registration | User will enter personal information for the database, such as last/first name, and the zipcode as a primary key.  If the zip is not in the database, a new area is created that the user gets entered into.  A user is associated with an area containing other users based on the zipcode. | R1 |
| **2** | Account Management - Edit Personal Info | Allows the user to change personal information after registration    User is warned if essential info is getting altered. | R2 |
| **3** | Account Management - Edit user preferences | User can change preferences, such as a block list. | R2 |
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| **4** | Tool Management – Registration | User can input various aspects of a tool (tool type, manufacturer, and pickup location).  Certain things, such as an ID, are automatically generated.  If more info is required, a message will appear if the user tries to submit any information. | R1 |
| **5** | Sharing- From Location | When a user shares a tool, it can be based on any address. By default, it would be based off of the user’s home address, but it doesn’t have to be.  The user may also post metadata up as an extra descriptor of the location. This metadata has no constraints and can be anything.  An item cannot be shared in two location at once. | R2 |
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| **6** | Sharing – Location Change | Edit the current location of tool pickup.    System will prevent relocation when tool has an unresolved future reservation. | R2 |
| **7** | Sharing – Availability Change | Set dates for tool availability. | R2 |
| **8** | Sharing – Borrow Approval | User is notified if someone wishes to borrow a tool, unless the owner specified otherwise when creating the entry for that tool. | R12 |
| **9** | Tool Listing – Availability | The user can list all tools available in the area. List automatically sorted. | R1 |
| **10** | Borrowing - Request | User will have to fill out a form to request an item. This includes date of pickup, usage, etc.  Owner of item will have to approve the request for the transaction to go through. | R2 |
| **11** | Borrowing – Logistics | Arrangements can include changing the pickup time from the request and setting up a return location. | R2 |
| **12** | Borrowing - Item Return | Borrower returns the item to the address specified, which can be found in the item description.  Upon return, both the borrower and the owner must confirm the return of the item. | R2 |
| **13** | Tool Management – Deregistration | User can deregister items at their leisure, as long as it isn’t already being borrowed. | R2 |
| **14** | Tool Management – Status | Can select a tool you borrowed or somebody is borrowing from you, allowing you to see its current status. |  |
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**Use case diagram**

**Use case description**

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|  | |  |  | | --- | --- | | **Use Case Number:** | **UC-01** | | **Use Case Name:** | **Registration** | | **Overview:** | **User provides relevant information to the system such as a name or pickup arrangements.** | | **Actor(s):** | **Registrant** | | **Preconditon(s):** | **-User is connected to the system**  **-The system is running and configured properly** | | **Scenario Flow:** | **Main (success) Flow:**  **1. User presses register button.**  **2. User prompted to enter information into system.**  **3. Confirmation of information entry.**  **a. If info is wrong, display warning and go back to step 2.**  **4. If user’s zip code is new to the system, a new Share Zone is added to the system.**  **5. User becomes associated with a given sharezone.**  **6. Notification of registration success.** | |  | **Alternate Flows: After step two**  **1. User selects cancel option.**  **2. System confirms cancel option via popup window.**  **3. Registration canceled.**  **4. User is returned to the home screen.** | |  |  | |  |  | | **Use Case Number:** | UC-02 | | **Use Case Name:** | Account Management Change-Personal Info | | **Overview:** | User can change personal information after registration occurs | | **Actor(s):** | Registrant | | **Pre condition(s):** | -Registration Completed | | **Scenario Flow:** | Main (success) Flow:  1. Registrant selects option to change preferences  2. Preferences menu appears  3. User enters information and presses enter.  4. System asks the user if the changes should be committed.  a. If user selects no, repeat step two  5. System checks if preferences are valid.  a. If not, return to step two.  6. User data is saved  7. User notified of changes  8. User is brought back to the home screen. | |  | **Alternate Flows:**  After Step(2) System will display the option to Cancel the registration process. The following steps would occur:  1. Registrant selects option to cancel during registration  2. System requests confirmation to cancel  3. Registrant confirms intent  4. System returns to main screen | | **Post Condition:** | Registrant did not complete registration. System does not store Registrant's information. | |
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| **Use Case Number:** | **UC-03** |  |
| **Use Case Name:** | **Edit User Preferences** |  |
| **Overview:** | **User is allowed to edit preferences after initial registration** |  |
| **Actor(s):** | **Registrant** |  |
| **Preconditon(s):** | **-User is connected to the system**  **-The system is running and configured properly**  **-User has registered** |  |
| **Scenario Flow:** | **Main (success) Flow:**  **1. User presses preferences button.**  **2. Press the edit preferences button**  **3. User prompted to enter information into system.**  **4. Confirmation of information entry.**  **a. If info is wrong, display warning and go back to step 3.**  **5. Confirmation of information**  **6. User is returned to main screen.** |  |
| **Post Condition:** | Preference change not finished. Preferences are not edit. |  |

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| **Use Case Number:** | UC-04 |
| **Use Case Name:** | Tool Registration |
| **Overview:** | User will register a tool for borrowing. |
| **Actor(s):** | Owner |
| **Pre condition(s):** | -User is registered  -User is connected  -User has tools to register |
| **Scenario Flow:** | Main (success) Flow:  1. Owner selects option to register tools  2. System requests info about tools  3. Owner provides info about tools  4. System verifies required information is provided.  a. · If information is invalid System displays message. Return to Step 2  5. User receives message that registration was successful  6. User is returned to the homepage |
|  | **Alternate Flows:**  After step 2, the owner will be given the option to cancel. If this is chosen, the following will occur:  1. Owner selects option to cancel  2. System requests confirmation to cancel  3. Owner confirms cancellation  4. System returns to main screen |
| **Post Condition:** | Owner did not complete registration. Item is not added to database |
| **Use Case Number:** | UC-05 |
| **Use Case Name:** | Sharing From Location |
| **Overview:** | A registered item is shared based off of a given location |
| **Actor(s):** | Owner |
| **Pre condition(s):** | -User is registered  -User is connected  -User has tools registered |
| **Scenario Flow:** | Main (success) Flow:  1. Owner selects option to share a tool  2. System requests information regarding the share  3. Owner provides info about the share  4. System verifies required information is provided.  a. · If information is invalid System displays message. Return to Step 2  5. User receives message that the share was successful  6. User is returned to the homepage |
|  | **Alternate Flows:**  After step 2, the owner will be given the option to cancel. If this is chosen, the following will occur:  1. Owner selects option to cancel  2. System requests confirmation to cancel  3. Owner confirms cancellation  4. System returns to main screen |
| **Post Condition:** | Owner did not complete the share. The item is not added to the share list. |

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| **Use Case Number:** | UC-06 |
| **Use Case Name:** | Location Change |
| **Overview:** | Changes the location to pickup/receive a tool |
| **Actor(s):** | Owner |
| **Pre condition(s):** | -User is registered  -User is connected  -User has tools registered  -User has tools shared |
| **Scenario Flow:** | Main (success) Flow:  1. Owner selects list of shared tools  2. Owner selects tool that he would like to change the location of  3. System displays information to be entered  4. User enters information  5. System verifies required information is provided.  a. · If information is invalid System displays message. Return to Step 3  5. User receives message that the share was successful  6. User is returned to the homepage |
|  | **Alternate Flows:**  After step 3, the owner will be given the option to cancel. If this is chosen, the following will occur:  1. Owner selects option to cancel  2. System requests confirmation to cancel  3. Owner confirms cancellation  4. System returns to main screen |
| **Post Condition:** | Owner did not change the tool’s location. No information was edited. |

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| **Use Case Number:** | UC-07 |
| **Use Case Name:** | Availability Change |
| **Overview:** | Changes the availability of a tool |
| **Actor(s):** | Owner |
| **Pre condition(s):** | -User is registered  -User is connected  -User has tools registered  -User has tools shared  -User has tools registered  -Registered tool isn’t currently being borrowed |
| **Scenario Flow:** | Main (success) Flow:  1. Owner selects list of registered tools  2. Owner selects tool that he would like to change the availability of  3. System displays information to be entered  4. User enters information  5. System verifies required information is provided.  a. · If information is invalid System displays message. Return to Step 3  5. User receives message that the availability change was successful  6. User is returned to the homepage |
|  | **Alternate Flows:**  After step 3, the owner will be given the option to cancel. If this is chosen, the following will occur:  1. Owner selects option to cancel  2. System requests confirmation to cancel  3. Owner confirms cancellation  4. System returns to main screen |
| **Post Condition:** | Owner did not change the tool’s availability. |

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| **Use Case Number:** | UC-08 |
| **Use Case Name:** | Borrow Approval |
| **Overview:** | Approves a tool to be borrowed |
| **Actor(s):** | Owner |
| **Pre condition(s):** | -User is registered  -User is connected  -User has tools registered  -User has tools shared  -User has tools registered  -Registered tool isn’t currently borrowed  -Borrower is requesting a tool |
| **Scenario Flow:** | Main (success) Flow:  1. Owner selects notification tab  2. Owner selects borrow notification  3. System displays borrow request  4. Owner selects yes  5. User receives message that the item has been borrowed, along with the data and time it will be returned  6. User is returned to the homepage |
|  | **Alternate Flows:**  At step 3, the owner will be given the option to click “No”. If this is chosen, the following will occur:  1. System requests confirmation to deny the request  2. Owner confirms denial  3. System returns to main screen |
| **Post Condition:** | Owner did not lend the tool |

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| **Use Case Number:** | UC-09 |
| **Use Case Name:** | Available Items |
| **Overview:** | Shows a list of all available items |
| **Actor(s):** | Owner, borrower |
| **Pre condition(s):** | -User is registered  -User is connected |
| **Scenario Flow:** | Main (success) Flow:  1. User selects tool list  2. All currently available tools are displayed by default |
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| **Use Case Number:** | UC-10 |
| **Use Case Name:** | Borrow Request |
| **Overview:** | Requests to borrow a tool |
| **Actor(s):** | Borrower |
| **Pre condition(s):** | -User is registered  -User is connected  -Tools are registered |
| **Scenario Flow:** | Main (success) Flow:  1. Borrower selects tool list  2. Borrower selects item  3. Borrower selects borrow request  4. System displays “Are you sure?” message  5. Borrower clicks yes  5. System displays that the message was sent  6. Borrower is returned to his homepage |
|  | **Alternate Flows:**  At step 4, the borrower will be given the option to click “No”. If this is chosen, the following will occur:  1. System requests confirmation to deny the request  2. Owner confirms denial  3. System returns to main screen |
| **Post Condition:** | Borrower did not send the borrow request |

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| **Use Case Number:** | UC-11 |
| **Use Case Name:** | Borrow Logistics |
| **Overview:** | Works out the logistics of how a tool will be returned |
| **Actor(s):** | Borrower |
| **Pre condition(s):** | -User is registered  -User is connected  -User is borrowing tools |
| **Scenario Flow:** | Main (success) Flow:  1. Borrower selects borrowed tools tab  2. Borrower selects tool  3. Borrower selects logistics tab, which opens up a chat window with the owner  a. Owner is sent a message if not online  4. Borrower commuicates with owner regarding logistics |
|  | **Alternate Flows:**  At step 3, the borrower will be given the option to click “End Conversation”. If this is chosen, the following will occur:  1. The chat window is exited |
| **Post Condition:** | The logistics meeting is cancelled. |

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| **Use Case Number:** | UC-12 |
| **Use Case Name:** | Borrowed Item Return |
| **Overview:** | Marks an item as returned |
| **Actor(s):** | Owner, Borrower |
| **Pre condition(s):** | -User is registered  -User is connected  -Owner has tools registered  -Owner has tools shared |
| **Scenario Flow:** | Main (success) Flow:  1. Borrower selects tool list  2. Borrower selects borrowed tools  3. System displays borrowed tools  4. Borrower selects tool that has been returned  5. Borrower presses “Mark as returned”  6. Owner receives “Mark as returned” notification  7. Owner presses okay on “Mark as Returned”  8. Both are returned to the homescreen once process is complete |
|  | **Alternate Flows:**  At step 7, the owner will be given the option to click “No”. If this is chosen, the following will occur:  1. System requests confirmation to deny the request  2. Owner confirms denial  3. System returns to main screen |
| **Post Condition:** | Tool status leaves unchanged |

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| **Use Case Number:** | UC-13 |
| **Use Case Name:** | Tool Deregistration |
| **Overview:** | Removes tool from registered list |
| **Actor(s):** | Owner |
| **Pre condition(s):** | -User is registered  -User is connected  -Owner has tools registered  -Owner has tools shared |
| **Scenario Flow:** | Main (success) Flow:  1. Owner selects a tool from the registered tool list  2. Owner selects deregister option  a. If item is out, owner is returned to step 1  3. Owner Receives success message  4. Owner returned to the main screen |
|  | **Alternate Flows:**  A step 2, the owner will be given the option to click “Cancel”. If this is chosen, the following will occur:  1. System requests confirmation to deny the request  2. Owner confirms denial  3. System returns to main screen |
| **Post Condition:** | Tool remains registered |

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| **Use Case Number:** | UC-14 |
| **Use Case Name:** | Tool Status |
| **Overview:** | Removes tool from registered list |
| **Actor(s):** | Owner, Borrower |
| **Pre condition(s):** | -User is registered  -User is connected |
| **Scenario Flow:** | Main (success) Flow:  1. User selects a tool from the tool list  2. User selects status option |
|  | **Alternate Flows:**  From step 1 onwards the user will be given the option to click “Cancel”. If this is chosen, the following will occur:  1. System requests confirmation to go back to the homescreen  2. Owner confirms  3. System returns to main screen |
| **Post Condition:** | No status is seen |