Requirement Specifications

**Use Case**: View Inventory Database (interchangeable)

**Summary**: Admin or TA requests to view inventory database for raspberry pi’s

**Basic Course of Events**:

1. TA or Network admin requests to view inventory
2. They will be prompted to authenticate themselves
3. Once validated, an inventory report will be generated and displayed

**Alternate Paths**: At Step 2, the user can cancel request for an inventory report

**Exception Paths**: At Step 3, if the user’s information cannot be validated, then they will not be permitted to view the inventory

**Precondition**: The Network Admin must have completed use-case “Login Authentication”

**Postcondition**: The Network Admin can view the equipment within the inventory database

**Use Case:** Check Out Equipment

**Summary:** GTA scans Item to check out

**Basic Course of Events:**

1. GTA Scans the barcode on the Equipment box
2. The information is entered into the database
3. The GTA completes use-case “Update Inventory”

**Alternate Paths:** If the GTA finds any missing equipment from the container they can cancel and find another container.

**Exception Paths:** If the students credentials are incorrect they are not allowed to check out equipment.

**Preconditions:** The Login Authentication is completed successfully

**Postconditions:** The equipment is given to the student and is no longer available to be checked out again.

**Use Case:** Check In Equipment

**Summary:** GTA can check equipment back into the database system

**Basic Course of Events:**

1. GTA checks to make sure all the equipment is within the container
2. Then they will proceed to scan the barcode on the box
3. Information is stored into the database
4. The GTA completes use-case “Update Inventory”

**Alternate Paths:** If the GTA finds any missing equipment from the container they can make mark it “replaced” and add reasons why

**Exception Paths:** At step 1, if equipment is damaged/missing parts then the equipment will be marked as “damaged” and will not be available to be checked out right away

**Preconditions:** Student who checked equipment out should check it back in with their credentials

**Postconditions:** The equipment is given to the GTA and is now available to be checked out again.

**Use Case:** Update Inventory

**Summary:** Admin or GTA can make update to the inventory of equipment

**Basic Course of Events:**

1. User selects equipment they wish to update
2. The user will be prompted to authenticate themselves
3. Once validated, the user will be permitted to make changes to the selected equipment

**Alternate Paths:** At Step 2, the user can cancel request to update equipment

**Exception Paths:** At Step 3, if the user’s information cannot be validated, then they will not be able to update equipment

**Preconditions:** The user must have completed the Use Case “Login Authentication”

**Postconditions:** The user will have permission to update the selected equipment

**Use Case:** Add Equipment

**Summary:** The Network Admin has the permissions to add more equipment to the database

**Basic Course of Events:**

1. The Network Admin requests to add new equipment to the database
2. They will be prompted to authenticate themselves
3. They can then enter the serial identification that corresponds to the barcode that belongs to the equipment box

**Alternate Paths:** At Step 2, the user can cancel the request for adding new equipment

**Exception Paths:** At Step 3, if the user’s information cannot be validated, then they will not be permitted to add to the inventory and will be displayed an error message

**Preconditions:** The Login Authentication is completed successfully

**Postconditions:** The Network Admin can add more equipment to the inventory database

**Use Case:** Delete Equipment

**Summary:** The Network Admin has the permissions to delete equipment from the database

**Basic Course of Events:**

1. The Network Admin requests to delete equipment from the inventory database
2. They will be prompted to authenticate themselves
3. They can then enter the serial identification that corresponds to the barcode that belongs to the equipment box

**Alternate Paths:** At Step 2, the user can cancel the request for deleting equipment

**Exception Paths:** At Step 3, if the user’s information cannot be validated, then they will not be permitted to delete from the inventory and will be displayed an error message

**Preconditions:** The Network Admin must have completed use-case “Login Authentication”

**Postconditions:** The Network Admin can delete one or more equipment from the inventory database

**Use Case:** Add Graduate Teaching Assistant (GTA) User

**Summary:** The Network Admin can add another GTA user to the system to handle equipment inventory

**Basic Course of Events:**

1. The Network Admin requests to add a GTA user to the user database
2. They will be prompted to authenticate themselves
3. They can then enter the name of the GTA into the user database
4. The user database will be updated

**Alternate Paths:** At Step 2, the user can cancel the request for adding new GTA users

**Exception Paths:** At Step 3, if the user’s information cannot be validated, then they will not be permitted to add a user and will be displayed an error message

**Preconditions:** The Network Admin must have completed use-case “Login Authentication”

**Postconditions:** The Network Admin can add one or more users to the user database

**Use Case:** Remove Graduate Teaching Assistant from user database

**Summary:** The Network Admin can remove a GTA user from the system for handling equipment inventory

**Basic Course of Events:**

1. The Network Admin requests to remove a GTA user from the user database
2. They will be prompted to authenticate themselves
3. They can then enter the name of the GTA into the user database
4. The user name will be removed and the user database will be updated

**Alternate Paths:** At Step 2, the user can cancel the request for deleting GTA users

**Exception Paths:** At Step 3, if the Network Admin’s information cannot be validated, then they will not be permitted to remove a user and will be displayed an error message

**Preconditions:** The Network Admin must have completed use-case “Login Authentication”

**Postconditions:** The Network Admin can remove one or more users to the user database

**Use Case:** Update Graduate Teaching Assistant

**Summary:** The Network Admin can update a GTA user’s name in the system for handling equipment inventory

**Basic Course of Events:**

1. The Network Admin requests to update a GTA user name within the user database.
2. They will be prompted to authenticate themselves
3. They can then enter the current name of the GTA into the user database
4. The NA is requested to with a display to change the user’s name to another name
5. The previous user’s name will be removed and the new user’s name will be updated into the user database

**Alternate Paths:** At Step 2, the user can cancel the request for updating the GTA user name

**Exception Paths:** At Step 3, if the Network Admin’s information cannot be validated, then they will not be permitted to remove a user and will be displayed an error message. They also can’t change the users name to another current user’s name

**Preconditions:** The Network Admin must have completed use-case “Login Authentication”. The new name (first, last) cannot already be within the system

**Postconditions:** The Network Admin can update one or more user names to the user database

**Use Case:** Login Authentication

**Summary:** Admin or TA are requested to login for making edits within inventory database for raspberry pi’s

**Basic Course of Events:**

1. The user will be requested with a window with input for login username and password
2. The system will check with the user database for validation
3. The NA or TA now can access to certain properties within the inventory database system

**Alternate Paths:** The user of the application can cancel or exit out of the application at any point before logging in

**Exception Paths:** At Step 2, if the NA or GTA’s information cannot be validated, then they will not be permitted to login and will be displayed an error message.

**Preconditions:** The user must have login information that is within the system

**Postconditions:** The Network Admin or GTA user can have access to making edits within the equipment and user database based on privileges.