Actors

1. Cincinnati resident
2. Non-resident of Cincinnati
3. Law enforcement official
4. System

Use Cases:

1. Register user
2. Authenticate user
3. Change user password
4. Reset user password
5. Login after reseting password
6. Change user privileges
7. View crime data overview
8. View crime data by neighborhood
9. View crime data by incident type
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12. Edit incident description
13. Edit incident address
14. Edit incident date
15. Delete incident
16. Rate a neighborhood
17. Search based on time period

Use Case: Register user

Actors: Cincinnati resident, nonresident, or law enforcement official

Preconditions: A user is not logged in

Postconditions: A new account will be created for the user

Basic Flow:

1. A user enters a unique username
2. The user enters a password that meets criteria for being secure
3. The user re-enters the same password to check for typos
4. The user must enter a valid email address to have the ability to reset their password
5. The user will specify whether they are a resident or non-resident of Cincinnati

Alternative Flows:

1a. The username is already taken

1. The user will have to select a new username

2a. The user enters a password that is not secure

1. The user will have to change their password to comply with the website's security policy

3a. The reentered password does not match the original password

1. The user must re-type their password to confirm there are no typos

4a. The user did not enter a valid email address
    1. The entered email address must be syntactically correct

Summary: A user that wishes to interact with the Crime Stoppers system must create an account. After an account has been created, a user will have access to all resident and nonresident features of the application.

Use Case: Authenticate user
Actors: Cincinnati resident, nonresident, or law enforcement official
Preconditions: A user is not logged in
Postconditions: A user will be authenticated and allowed to view content they have access to
Basic Flow:

1. A user enters their username
2. A user enters their password
3. The form is submitted for validation
4. If the user logged in using a temporary password, they must set a new password (Use case “Login after reseting password”)

Summary: A user needs to authenticate with the system before they can view or change content. If the user does not have an account, one must be created first. After the user authenticates, they will have access to view content (if they are registered as a resident/nonresident) or edit content (if they are a member of law enforcement).

Use Case: Change user password
Preconditions: A user is authenticated
Postconditions: The user will have a new password
Basic Flow:

1. The user enters in their current password
2. The user enters a new password that meets criteria for being secure
3. The user re-enters the same password to check for typos
4. The password is saved as the user’s new password

Alternate Flow:

1a. The user enters an incorrect password
    1. User will be re-prompted to enter their current password
2a. User enters a password that does not match defined criteria
    1. User will be re-prompted to enter a password matching defined criteria
3a. User re-enters password that does not match password from step 2.
    1. User will be prompted to re-enter a new password twice in succession

Summary: An authenticated user can change their password by verifying that they know the current password. A new password will be checked for security and typos before being saved as the user’s new password.

Use Case: Reset user password
Actors: Cincinnati resident, nonresident, or law enforcement official, System
Preconditions: A user is not logged in
Postconditions: A user will have a temporary password to login with
Basic Flow:

1. A user enters the email address they specified when creating their account
2. A temporary password is randomly generated by the System
3. The temporary password is set as the user's new password
4. The user's account is set to require password change on next login
5. The temporary password is emailed to the user

Alternative Flows:

1a. The user enters an email not associated with an account
    1. The user is notified that the email address is invalid

Summary: If a user forgets their password, they can request a new one. A randomly generated password will be emailed to the user. After logging in again, the user must set a new password.

Use Case: Login after reseting password
Actors: Cincinnati resident, nonresident, or law enforcement official
Preconditions: The user logged in using their temporary password
Postconditions: The user will have a new password of their choosing
Basic Flow:

1. The user enters a new password that meets criteria for being secure
2. The user re-enters the same password to check for typos
3. The password is saved as the user's new password

Alternative Flows:

1a. The user enters a password that is not secure
    1. The user will have to change their password to comply with the website's security policy

2a. The reentered password does not match the original password
    1. The user must re-type their password to confirm there are no typos

Summary: If a user resets their password, a randomly generated temporary password will be emailed to the user. After logging in with the temporary password, the user must immediately set a new password. This password will become the user's new password for authenticating with the system.

Use Case: Change user privileges
Actors: Law enforcement official, System
Preconditions: A user with write access to user permissions is logged in
Postconditions: A Cincinnati resident or nonresident will be moved to law enforcement status or a law enforcement official will be moved to resident/nonresident status

Basic Flow:

1. The law enforcement official selects a registered user to change permissions of
2. The user selects Cincinnati resident, nonresident, or law enforcement official
3. The changes are committed to the system

Summary: In order for a member of law enforcement to have permission to edit crime records, they must be given elevated status by another member of law enforcement. After their status is changed, they will be able to edit or delete crime records. Alternatively, if the user is no longer allowed write access, the user can be dropped to Cincinnati resident/nonresident status.

Use Case: View crime data overview
Actors: Cincinnati resident, nonresident, or law enforcement official
Preconditions: A user is logged in
Postconditions: n/a
Basic Flow:

1. A map of the area is displayed to the user
2. Crime records are overlayed on the map, color coded by severity and frequency
3. A table of overall statistics is displayed, listing the top incidents in Cincinnati

Summary: The overview screen displays a summary of crime information in Cincinnati. At a glance, users will be able to see where the heavy concentrations of severe crimes take place, as well as their frequency.

Use Case: View crime data by neighborhood
Actors: Cincinnati resident, nonresident, or law enforcement official
Preconditions: A user is logged in
Postconditions: n/a
Basic Flow:

1. A neighborhood is selected by the user
2. A map is show on the screen with an overlay detailing the locations and frequencies of crime records in the selected neighborhood

Summary: A user can select a neighborhood to view detailed crime information. Information such as top crime types, frequency, and average severity rating will be displayed in an easy to read format.

Use Case: View crime data by incident type
Actors: Cincinnati resident, nonresident, or law enforcement official
Preconditions: A user is logged in
Postconditions: n/a
Basic Flow:

1. An incident type is selected by the user

2. A map is show on the screen with an overlay detailing the locations and frequencies of the selected incident type

Summary: A user can select an incident type to view more detailed information about it. Information such as the severity ranking, frequency, and location concentration will be displayed in an easy to read format.

Use Case: Import new crime data
Actors: Law enforcement official, System
Preconditions: An authenticated user who has write access (law enforcement)
Postconditions: New crime records will be entered into the system
Basic Flow:

1. The user will upload a valid CSV file containing crime data
2. The CSV will be parsed by the system for accuracy, then added to the database
3. The System will check for unique response descriptions and assign IDs for fast look ups

Alternative Flows:

1a. There is an error uploading the file
    1. An error will be displayed to the user. The file must be re-uploaded
2. The CSV file is not formatted correctly
    1. The user will have to upload a new CSV file that is in the proper format

Summary: The easiest way to import data into the system is to upload a CSV file with emergency response information (date, address, response type). If the records are valid, they will be added to the system. Incident descriptions are checked for uniqueness and assigned an identifier so they can be searched for later.

Use Case: Edit incident severity rating
Actors: Law enforcement official, System
Preconditions: An authenticated user who has write access (law enforcement)
Postconditions: The severity rating for an incident description will be modified
Basic Flow:

1. An incident is selected from a list of available incident descriptions
2. The current severity rating is displayed (1-10 scale with 10 being the most severe)
3. A new severity rating is selected
4. The new rating is committed to the system

Summary: A law enforcement official can rank different incident types with a numerical scale ranging from 1 to 10 (10 being the most severe). This scale is used to display crime reports and color code map overlays. Users will be able to easily gauge how safe an area is by the concentration of high ranking incidents in the vicinity.

Use Case: Edit incident description
Actors: Law enforcement official
Preconditions: An authenticated user who has write access (law enforcement). At least one crime record exists in the system.
Postconditions: An incident type will be renamed
Basic Flow:

1. A user selects the incident type to rename
2. The original name is displayed (read-only)
3. The user can enter a new name to make the incident more readable
4. The label for the incident is changed for all records matching the incident ID

Summary: A law enforcement official can change the label for incidents to make them more user-friendly. The original description will always be preserved and can be reverted by deleting the custom label. Creating a custom label for an incident changes all records with that incident type.

Use Case: Edit incident address
Actors: Law enforcement official
Preconditions: An authenticated user who has write access (law enforcement). At least one crime record exists in the system.
Postconditions: An incident address will be changed
Basic Flow:

1. A user selects the incident
2. The original address is displayed (read-only)
3. The user can enter a new address
4. The label for the address is changed for all records matching the incident event ID

Summary: A law enforcement official can change the address of an incident if there was an error upon first entry. Once the address is changed, it cannot revert back to the previous address.

Use Case: Edit incident date
Actors: Law enforcement official
Preconditions: An authenticated user who has write access (law enforcement). At least one crime record exists in the system.
Postconditions: An incident type will be renamed
Basic Flow:

1. A user selects the incident they want to edit
2. The original date is displayed (read-only)
3. The user can enter a new date
4. The label for the date is changed for all records matching the incident ID

Summary: A law enforcement official can change the date of an incident if there was an error upon first entry. Once the date is changed, it cannot revert back to the previous date.

Use Case: Delete incident
Actors: Law enforcement official
Preconditions: An authenticated user who has write access (law enforcement). At least one crime record exists in the system.
Postconditions: An incident type will be deleted
Basic Flow:

1. A user selects the incident
2. The original incident information is displayed (read-only)
3. The user can select an incident that they want to delete
4. The user confirms that they want to delete the incident

Summary: A law enforcement official can delete a record for any reason. There is no way to delete the event number individually so if an error is made in the incident entry to the system, the entire record will need to be deleted and re-entered.

Use Case: Rate a neighborhood
Actors: Cincinnati resident
Preconditions: A user is logged in
Postconditions: Add a rating to a neighborhood, with optional comment
Basic Flow:

1. The user selects the neighborhood they wish to leave a rating on
2. The user rates the neighborhood from 1-10 (10 being the best rating)
3. The user can optionally leave a comment justifying their rating
4. The comment is committed to the database

Summary: The user wants to tell the public about his/her experience in a neighborhood in terms of safety. The user type the zip code and rate the neighborhood. A comment can optionally be left to justify their rating.

Use Case: Search based on time period
Actors: Cincinnati resident, nonresident, or law enforcement official
Preconditions: A user is logged in
Postconditions: n/a
Basic Flow:

1. The user selects a neighborhood
2. The user chooses a time period
3. A chart displays the types crimes and frequency over the specified time period

Summary: The user wants to know the trend of crimes in an area over a specified time period. After the user selects a neighborhood and the time period, a chart will display what types of crime and their frequencies happened in the specified time period.