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Actors

1. Authenticated User
2. Anonymous User
3. Administrator
4. OpenDataCincy

Use Cases:

1. Register user
2. Authenticate user
3. Change user password
4. Reset user password
5. Logout
6. Login after resetting password
7. Change user privileges
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Use Case 1: Register user
Actors: Authenticated User or Administrator
Preconditions: A user is not logged in
Post conditions: 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 Authenticated features of the application.

Use Case 2: Authenticate user

Actors: Authenticated User or Administrator

Preconditions: A user is not logged in

Post conditions: 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 Authenticated User) or edit content (if they are an Administrator).

Use Case 3: Change user password

Actors: Authenticated User or Administrator

Preconditions: A user is authenticated

Post conditions: 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 4: Reset user password
Actors: Authenticated User or Administrator
Preconditions: A user is not logged in
Post conditions: 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 5: Logout
Actors: Authenticated User or Administrator
Preconditions: A user is logged into the website
Post conditions: A user is logged out of the website
Basic Flow:

1. The user clicks on the logout button
2. The user is logged out of the site

Summary: This functionality gives the user the ability to manually log out of the website.

Use Case 6: Login after resetting password
Actors: Authenticated User or Administrator
Preconditions: The user logged in using their temporary password
Post conditions: 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 7: Change user privileges
Actors: Administrator
Preconditions: A user with write access to user permissions is logged in
Post conditions: Authenticated User or Anonymous User will be moved to Administrator status or Administrator will be moved to Authenticated/Anonymous User status
Basic Flow:

1. The Administrator selects a registered user to change permissions of
2. The user selects Authenticated User, Anonymous User, or Administrator
3. The changes are committed to the system

Summary: In order for an Administrator to have permission to edit crime records, they must be given elevated status by another Administrator. 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 Authenticated User/Anonymous User status.

Use Case 8: View crime data overview
Actors: Authenticated User, Anonymous User, or Administrator
Preconditions: A user is logged in
Post conditions: System displays crime data overview
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 9: View crime data by region
Actors: Authenticated User, Anonymous User, or Administrator
Preconditions: A user is logged in
Post conditions: System displays crime data by region
Basic Flow:

1. A region 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 region

Summary: A user can select a region 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 10: View crime data by incident type
Actors: Authenticated User, Anonymous User, or Administrator
Preconditions: A user is logged in
Post conditions: System displays crime data by incident type
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 11: Import new crime data
Actors: Administrator
Preconditions: An authenticated user who has write access (Administrator)
Post conditions: 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 12: Submit incident severity rating
Actors: Administrator
Preconditions: An authenticated user who has write access (Administrator)
Post conditions: 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: Administrator 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 13: Edit incident description
Actors: Administrator
Preconditions: An authenticated user who has write access (administrator). At least one crime record exists in the system.
Post conditions: 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: An administrator 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 14: Rate a region
Actors: Authenticated User
Preconditions: A user is logged in
Post conditions: Add a rating to a region, with optional comment
Basic Flow:

1. The user selects the region they wish to leave a rating on
2. The user rates the region 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 region in terms of safety. The user types the zip code and rates the region. A comment can optionally be left to justify their rating.

Use Case 15: Search based on time period
Actors: Authenticated User, Anonymous User, or Administrator
Preconditions: A user is on the website
Post conditions: User gets time period based results from website
Basic Flow:

1. The user selects a region
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 region and the time period, a chart will display what types of crime and their frequencies happened in the specified time period.

Use Case 16: Save Search
Actors: Authenticated User or Administrator
Preconditions: A user is logged in
Post conditions: User saves a search for future use
Basic Flow:

1. The user performs a search
2. On results page, user clicks “Save Search”
3. A dialog displays alerting the user the search has been saved

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

Use Case 17: Edit user preferences
Actors: Authenticated User or Administrator
Preconditions: A user is logged in
Post conditions: User preferences are updated
Basic Flow:

1. The user clicks on Preferences within the webpage
2. The user makes adjustments to Preferences within the site
3. The user clicks “Save”

Summary: The user has the ability to set up custom preferences for their user account within the website.

Use Case 18: Set default region
Actors: Authenticated User or Administrator
Preconditions: A user is logged in
Post conditions: User default region is saved to user profile
Basic Flow:

1. The user clicks on Preferences within the webpage
2. The user selects their default region
3. The user clicks “Save”

Summary: The user has the ability to set up a default region for their user account within the website. This will be the default display when the user logs in.