

Homeland Security

Keeping track of each and every individual

CS 4310 Software Engineering I: Requirements

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Requirements

- Homeland Security must keep track of large threats that endanger the safety of the country.
- The application must keep track of legal citizens in the country and denote if they are a threat.
- Each person on the list will contain basic information such as first name, last name, social security number, address, criminal record (which can be communicated with the local police) and if they are a potential national threat.
- Find a way to communicate between local firefighter and police agencies to categorize criminals that can potentially be on the high national threat list.
- Homeland Security system will contain subgroups of varying influential voting power. Decisions will require a certain number of votes before being executed.
- Proposals of action will be relayed to each subgroup, if favored, the subgroup will vote for action and their voting power adds to the total for that proposition.
- Restrict user access to data appropriate for access level.

Orbital space protection

- Detect any projectiles in a radius within the United States
- Determine counter measures for objects in radius

Monitoring imports and exports

- Keep a list of all exports leaving the country in case of providing dangerous materials and objects to other countries
- List all imports entering the country and scan for dangerous objects/materials.
- Maintain a list of imports and exports in a country. Determine if they may be a threat to the U.S

Homeland Security: System Narrative

Why Homeland Security

The Homeland Security system is designed to keep track of registered citizens in the United States and keep note of information about the individual and if they are a potential threat. The system also enables communication within local authorities to place individuals of potential national threats onto a national list.

Create New Person

Add a new person into the list containing all registered people in the United States. A person contains first name, last name, address, criminal record, notes if person is on list of national threat. A person can also be a Homeland Security employee. If the person is DHS employee they will also belong to a subgroup.

Create Subgroup

The Homeland Security system consists of subgroups with voting power. A subgroup will have a name and description of the group.

Edit Person or Subgroup

If a person already exists in the list of registered users or subgroups and needs to be changed, the existing entry can be edited. User access level is verified before allowing the change.

Generate Proposition

Description of proposition to be sent to all subgroups to vote on. A proposition is a proposal for some action. For example, to move more boarder agents to a specific area.

Vote on a Proposition

Each subgroup can for Yes/No on a propositions.

Display Person

Users of the Homeland Security system will have to constantly check information on a person. The information is then displayed with the information a person records contains.

List of registered persons.

This list contains every registered person of United States. It contains basic information such as first name, last name, address, potential threat level and notes. This list can be filtered to return a subset.

List of potential threats

Certain criteria must be met to be added to the list of potential threats. There will be varying levels of threats and this list will also includes people not registered as citizens in the United States. The threat level score will be calculated every time the record is displayed.

Branches within Homeland Security

The system will consist of branches with different voting power. This is to ensure that high level propositions require the approval of multiple branches before being put into action. It will also divide the work between each branch to place jobs to their specified branch.

Space Radius Protection

Proximity Scan

Scan the proximity to see any objects flying to or around the United States. Determine if any projectiles are aimed toward the United States. This includes missiles, asteroids, satellites etc.

Intercept Space Object

Return coordinates of object and determine the best action to remove possible object from reaching earth.

Tracking imports/exports

The responsible department will keep track of exports being sent out of the country, and imports coming in from other countries. Trends will be monitored and suspicious activity will increase a country's threat level.

Border Protection

DHS is responsible for border security. It would need to track who enters the US legally, and prevent illegal border crossing. It would also need to track border security resources such as officers, equipment like helicopters, boats, etc.

Emergency response training

Employees of the various DHS agencies will require constant training to maintain a high level of competence. Our system can list available courses and allow employees to enroll in courses.

Resource management

DHS is tasked with helping local agencies respond to emergencies such as terrorist or natural disasters. Our system can manage resources such as equipment and trained personnel. The system can be used for search for and deploy resources from one location to where they are currently needed.

Cyber security

An important part of DHS's role is to secure our cyber infrastructure. Our system can track known hacker groups.

Conclusions

The system provides many features to not only keep track of registered individuals in the United States, but individuals with any level of potential risks to the nation. It also provides a system of balances to ensure a democratic action system.

Homeland Security: Interface Input

People

FIELD	VALUE	Comment
SSN	123-45-678	Person unique ID
First name	John	
Last name	Jones	
Address	123 Street ave. Hayward CA	
Threat Level	High	Calculated field
Connections	David Jones (Brother), Cindy Smith (Co-worker)	Connections to others in the database
Classification	Top Secret	Required access level to view record
Notes	Visited Pakistan in 2005	
Employee	Yes	DHS employee?
Subgroup	Border	If employee
Clearance	Top Secret	Employee clearance level

Proposition

FIELD	VALUE	Comment
Prod ID	0022	Unique ID
Name	Increase San Diego/Mexico border agents	
Description	Increased attempts to illegally enter the US from this border point requires more personnel. San Diego border patrol station 6 is requesting an additional 4 agents for the next 6-9 months.	Description of the action
Yes	30	Yes votes
No	2	No votes

Space Objects

FIELD	VALUE	Comment
UID	0045	Unique ID
Name	Chinese Satellite U4	Name of object
Location	100,242,535	Current coordinates

Imports and Exports

FIELD	VALUE	Comment
UID	0199	Unique ID
Name	Uranium	
Origin	US	
Destination	Niger	
Amount	10 50gal drums	

Resource management

FIELD	VALUE	Comment
UID	0499	Unique ID
Name	Helicopter	
Owner	National Guard	
Current Location	Camp Parks Dublin Ca	
Availability	Yes	Is resource available to redeploy

Hacker Groups

FIELD	VALUE	Comment
UID	0879	Unique ID
Name	BlackHatsRus	
Notes	Known for DoS attacks on banks	

Homeland Security: Output Reports

Search By SSN

SSN:	123-45-678
FIRST:	John
LAST:	Jones
ADDRESS:	123 Carlos Bee, Hayward CA 94560
Threat	HIGH
Notes	Suspect is labeled threat level high on account of previous discoveries leading to the planning of a mall bombing.

Display Subgroups

Branch Name:		Num Members	
National:		200	
International:		125	
Citizen Registration:		50	
Border:		50	
Cyber:		100	

Display Current Proposals

Proposal ID	Proposal Description
1	Send spies to Russia to gather information
2	Send troops to Iraq for support
3	Withdraw troops from Iraq
4	Hack China computers to potentially discover valuable information.

List individuals with potential threats

First	Last	SSN	Threat
John	Jones	123-45-678	HIGH
James	Jones	321-45-123	HIGH
Jay	Johnson	231-55-213	MED
Tony	Stark	232-42-653	MED
Jason	Schmidt	992-53-212	LOW

Proximity Scan

	position 1	position 2	position 3	most recent	predicted
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Object 1	100,242,535	125,242,545	150,242,600	180,242,700	200,242,900
Object 2	240,400,350	200,300,200	100,150,100	70,90,80	10,25,20
Object 3	X,Y,Z	X,Y,Z	X,Y,Z	X,Y,Z	delta X,Y,Z

Generate Import/Export List

Country	Exported	Quantity	Destination	Imported	Quantity	Origin
	rice	100 lbs	US	Tobacco	30 lbs	Zimbabwe
China	coffee	20 lbs	US	Silver	10 lbs	Madagascar
	pear	40 lbs	US	Gold	20 lbs	Madagascar
	apple	30 lbs	Mexico			
	wood	300 lbs	Mexico			
	aluminum	220 lbs	Canada			
	etc					

Emergency Response Resources

Name	Location	Owner	Available
Helicopter	Camp Parks Dublin Ca	National Guard	Yes
Cutter	San Diego, Ca	Coast Guard	No
Search and Rescue team	New York, NY	NY Fire Dept	Yes

Hacker Groups

Name	Notes
BlackHatsRus	Known for DoS attacks on banks
Anonymous	Loosely associated international network of activist and hacktivist entities