Requirements Document

Introduction

This web application will allow users to create accounts for the "Zombie Attack!" game. Users will be able to play "Zombie Attack!" and create maps that can be used in the game. It will be finished by the end of the fall 2013 semester.

Requirements

1. Website will allow users to create a user account.
2. There are 3 types of user accounts. Player, Designer, and Administrator.
   a. All account types can edit their account and change their password.
   b. Player
      i. Every user account will automatically be a player.
      ii. Players can view a list of maps that are available to play.
      iii. Players can select a map, and play using the Zombie Attack! API.
   c. Designer
      i. Designers can create a map using pre-determined tiles.
      ii. Designers can edit their account.
      iii. Designers can view and edit their own existing maps.
   d. Administrator
      i. Administrators have all the privileges of a Player and a Designer
      ii. Administrators can remove user accounts
      iii. Administrators can remove maps
      iv. Administrators can grant administrator privileges
3. Sign up:
   a. Option to be a designer or administrator.
   b. Designer checkbox will automatically allow user to be a map designer.
   c. Administrator checkbox will send an email to the current administrators with a message outlining why the user thinks they should be given admin privileges.

4. Map Designer:
    a. Maps will be built in square chunks, and then assembled into a larger map
    b. Designers will be able to:
        i. Create and edit maps including:
            1. New maps will have a default terrain of all grass.
            2. Add tiles, events, and objects.
            3. Edit maps on three different layers: cloud, tree, and ground
        ii. Keyboard shortcuts to make map editing quicker.
        iii. Use an optional grid to help layout tiles.
        iv. Copy and paste sections of map.
        v. Undo/Redo changes.
        vi. Maps will auto-save 15 seconds after a change, or with an explicit save.
5. Extra Features:
    a. Players Win/Loss Statistics will be saved and they can view them while logged in.
    b. Players may play Zombie Attack! as a guest.
    c. The Play Map feature will open in a new browser window.
    d. There will be a Random Map Selector for players.

System (Non-Functional) Requirements
1. Google Chrome 29.
2. Ubuntu 12.04 Operating System.

Glossary
1. Designer: A User account with access to the Map Designer Feature. A Designer is also a player
2. Player: A player account will allow a user to play the game.
3. Administrator: an account with Administrative, Designer and player privileges.
4. User: Someone who has signed up on the zombie attack site. This includes all Player, Designer, and Administrator accounts.
5. Zombie: A corpse said to be revived by witchcraft, esp. in certain African and Caribbean religions.

6. Attack! : A physical encounter with the intent to do bodily harm.

7. Game Map (within the context of Zombie Attack): Grid where the game is played.

8. Tiles: Square spaces on the game map

9. Events: Actions that happen during the course of the game

10. Objects: Part of the map that is not terrain, but consists of literal objects placed throughout the map

11. Maps: Playable scenarios

12. Layer: An editable tier of the map. Three layers will be editable in the Map Designer: the cloud, tree, and ground layers.

13. Cloud-layer: The uppermost level of editable features. Designers will be able to add clouds that will hover above the map

14. Tree-layer: The middle level of editable features. Designers will be able to add trees and objects that sit on the ground.

15. Ground-layer: The bottom level of editable features. Designers will be able to change the look of the terrain on the ground layer.
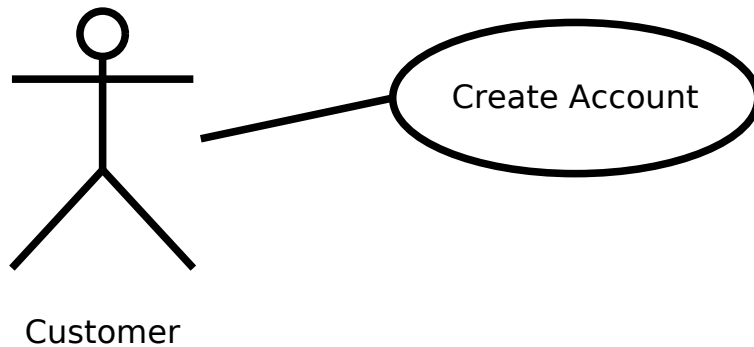
Customer

PRIMARY ACTOR:
   Customer

GOAL:
   Create an account for Zombie Attack!

TRIGGER:
   Customer wants a user account.

FLOW:
   1. User selects 'Create Account' option on Zombie Attack! website
   2. User fills out form data (username, password and e-mail).
   3. If user wants designer or administrator privileges they can
      select the appropriate checkbox.
   4. User clicks submit button.
   5. If 'Administrator' checkbox was selected, an email will be
      generated and sent to current administrators for approval.
   6. Email is generated and sent to user's email with validation
      link.

EXCEPTIONS:
   E-mail address provided by customer is already in use.
   User has not provided all required information on application.
   User has not validated their email.

Edit Account
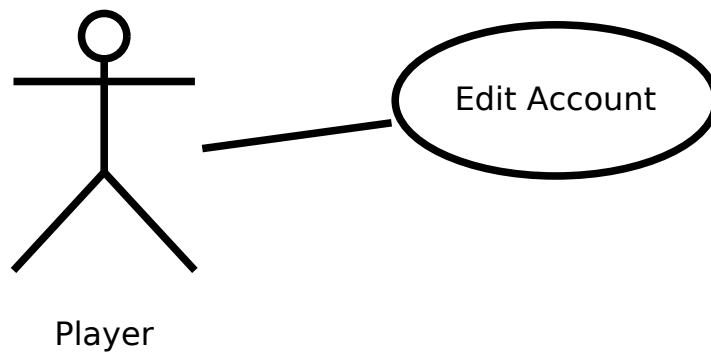
Player

PRIMARY ACTOR:
Player

GOAL:
Edit account information

TRIGGER:
Player wishes to edit account information

FLOW:
1. Player logs into account
2. Player is directed to account page
3. Player is allowed to edit/change info

EXCEPTIONS:
Player logs out before changes are saved
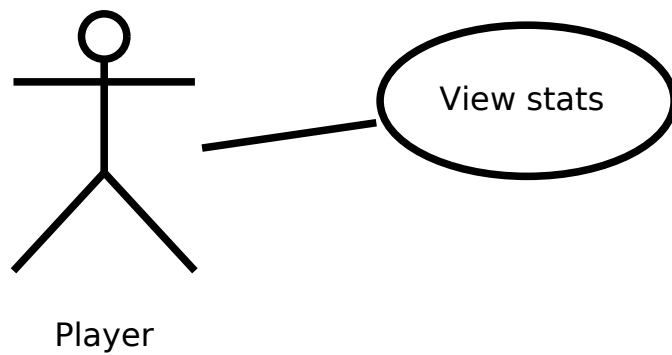
Player

PRIMARY ACTOR:
   Player

GOAL:
   View statistics about previous game play

TRIGGER:
   Player wishes to view stats

FLOW:
   1. Player logs into account
   2. Player selects the 'view stats' option
   3. Player statistics are displayed

EXCEPTIONS:
   Player chooses different option
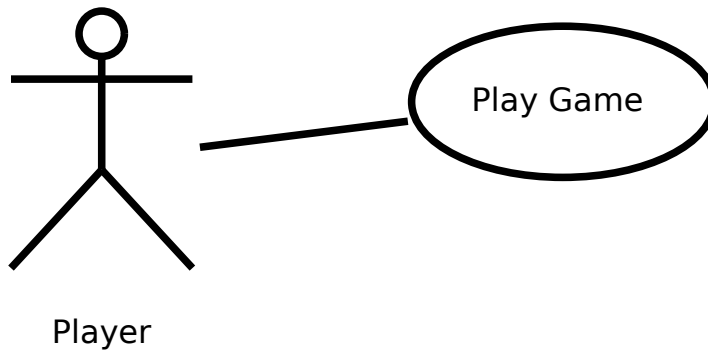
Play Game

Player

PRIMARY ACTOR:
   Player

GOAL:
   Play a game

TRIGGER:
   Player wishes to play a game

FLOW:
   1. Player logs into account
   2. Player selects the 'play game' option
   3. Player selects map to play or selects the
      Play Randomly Selected Map option
   4. Game appears in new browser window
   5. Player plays a game

EXCEPTIONS:
   Player decides not to play a game
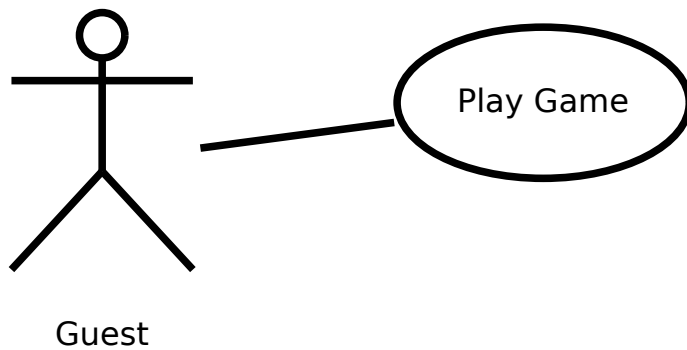
Guest

PRIMARY ACTOR:
   Guest

GOAL:
   Play the game without an account

TRIGGER:
   Guest wishes to play game

FLOW:
   1. Guest navigates to page
   2. Guest selects play as guest option
   3. Game appears in new browser window
   4. Guest plays game.

EXCEPTIONS:
   Guest decides not to play game
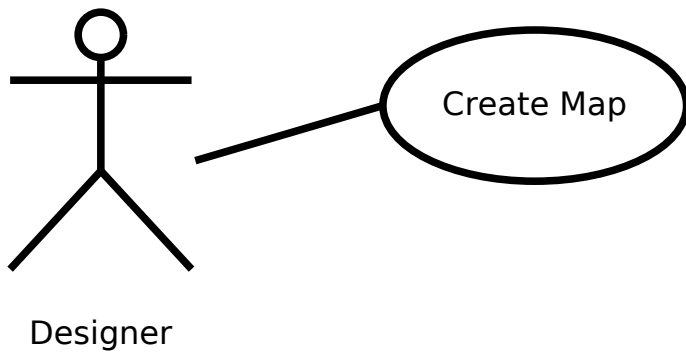
Designer

PRIMARY ACTOR:
   Designer

GOAL:
   To create a new map.

TRIGGER:
   The designer wishes to build a new map from scratch.

FLOW:
   1. User logs into their account with Designer privileges.
   2. User selects the Map Designer option.
   3. User selects the Create Map option.
   4. User creates new map.

EXCEPTIONS:
   User decides not to create map.
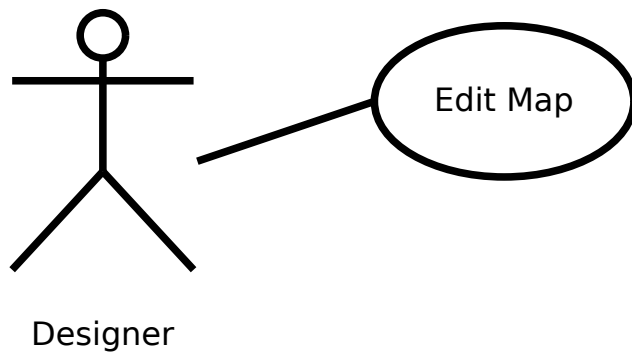
Designer

PRIMARY ACTOR:
   Designer

GOAL:
   To edit an existing map.

TRIGGER:
   The designer wishes to make changes to an existing map.

FLOW:
   1. User logs into their account with Designer privileges..
   2. User selects the Map Designer option.
   3. User selects the map to edit.
   4. User edits the map.

EXCEPTIONS:
   User dedides not to edit map.
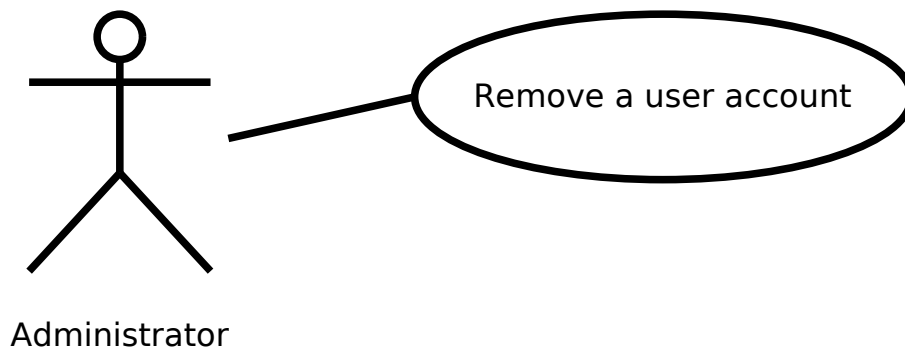
Administrator

PRIMARY ACTOR:
  Administrator

GOAL:
  Remove a user account

TRIGGER:
  Administrator wishes to remove a user account

FLOW:
    1. Admin selects user from database
    2. Admin deletes user information
    3. User account is removed

EXCEPTIONS:
  Admin decides not to remove user
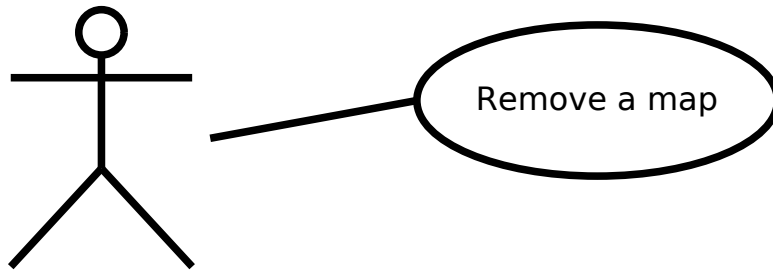
Administrator

PRIMARY ACTOR:
   Administrator

GOAL:
   Remove a map

TRIGGER:
   Administrator wishes to remove a map

FLOW:
   1. Admin selects map from database
   2. Admin deletes map information
   3. Map is removed

EXCEPTIONS:
   Admin decides not to remove map
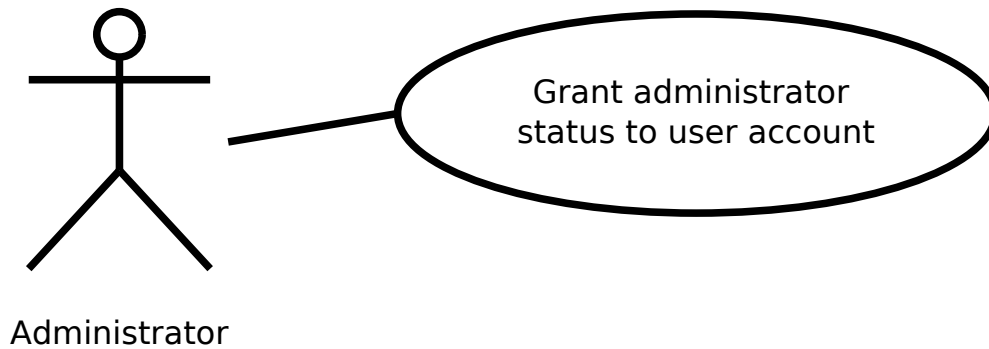
Administrator

PRIMARY ACTOR:
   Administrator

GOAL:
   Grant administrator status to a user account

TRIGGER:
   User requests administrator privileges

FLOW:
   1. Admin sees 'admin request' email
   2. Admin selects user account from database
   3. Admin sets user as administrator
   4. User has administrator privileges

EXCEPTIONS:
   Admin decides not to grant admin status
   User information or verification not complete

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│ Select 'Create Account' │
│        option           │
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│ Enter required          │◄──┐
│ information             │   │
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        ▼                     │ [Missing Info]
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│ Validate email address  │
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Login

[Invalid]

Select 'Edit Account' option

Make changes

Save changes

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            ┌───────────────────────────┐
            │  Log in to Designer account │◄─┐
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            │  Select 'Map Designer' option │
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  [Create new map]     ◇     [Edit existing map]
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│ Select 'Create Map' │      │  Select map to edit │
│       option        │      └─────────────────────┘
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       ▼                      ┌─────────────────────┐
┌─────────────────────┐      │ Select 'Edit Map'   │
│     Create map      │      │       option        │
└─────────────────────┘      └─────────────────────┘
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       │                      ┌─────────────────────┐
       │                      │      Edit map       │
       │                      └─────────────────────┘
       │          ┌──────────┐           │
       └─────────►│ Save map │◄──────────┘
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              └───────────────────────────┘  │
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              ┌───────────────────────────┐
              │      Select admin view    │
              └───────────────────────────┘
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              ┌───────────────────────────┐
              │    Select user from list  │
              └───────────────────────────┘
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              │     Delete user account   │
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        │       Select admin view     │
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        │      Select map from list   │
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        ┌─────────────────────────────┐
        │         Delete map          │
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Log in to admin account

[Invalid]

Select admin view

Select user from list

Select Grant Admin Status option