

# **CALAMITY: A Disaster Preparedness Application**

## **Use Case Specification**

Submitted to:

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### ***Unique Reference:***

The documents are stored in the <https://github.com/geneaudrey/Disaster-Preparedness/tree/master/02-Requirements%20Engineering/Project%20Deliverables>

referenced with Disaster Preparedness App - 2.3 - Play Storm Surge and Flood Scenario.

### ***Document Purpose:***

The purpose of this document is to elaborate on certain use cases by identifying the pre-conditions, post-conditions, and flow of events of the use case. The flow of events will be further clarified using an activity diagram and the flow of data will be illustrated using an entity-relation diagram. The use case that will be presented in this document is the 2.3 - Play Storm Surge and Flood Scenario.

### ***Target Audience:***

The following are part of the target audience:

- People who like or are interested in playing games
- People who have little to average knowledge on disaster preparedness, or people who would like to refresh their knowledge on disaster preparedness
- People who are interested in the development of the application

### ***Revision Control:***

<b><i>Revision Date</i></b>	<b><i>Person Responsible</i></b>	<b><i>Version Number</i></b>	<b><i>Modification</i></b>
09/20/19	Gene Tan	1.0	Initial Document Added Document Purpose, Target Audience
09/23/19	Filbert Wee	2.0	Added Use Case Name, Use Case Description, Preconditions Added Flow of Events Added Activity Diagram
09/23/19	Gene Tan	3.0	Added Entity-Relationship Diagram Added Relationships Modified postcondition and special requirements

**Use-Case Name:** 2.3 Play Storm Surge and Flood Scenario

**Description:** This use-case allows the player to play the flood and storm surge scenario. More specifically, it allows the player to make decisions to save his/ her friend from being dragged away in a flood. The story starts off with the player at home chatting with another of his friends through a messaging app. In the middle of their conversation, the friend hearing news an incoming storm surge. Certain decisions in the flood and storm surge scenario will unlock corresponding diary pages.

**Preconditions:** Player must finish the fire scenario first

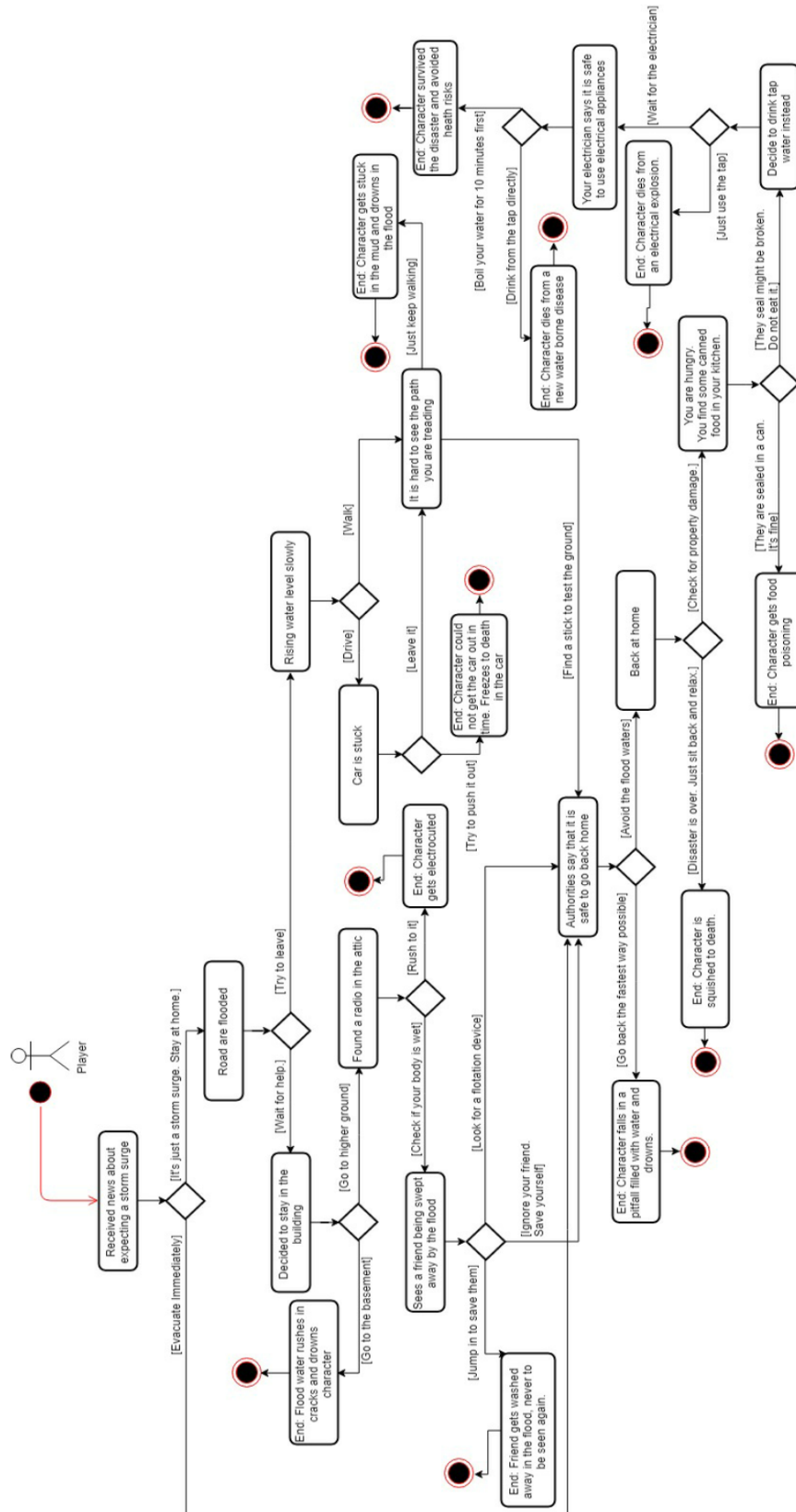
**Flow of Events:**

<b>Scenario Name</b>	<b>Description</b>
Scenario 1: Good Ending 1: Character evacuates before disaster strikes	1. Player decides to tell his friend to evacuate immediately. 2. [Continues to post disaster events.]
Scenario 2: Good Ending 2: Character survives the disaster indoors and saves another friend.	1. Player tells his friend that a storm surge isn't a big thing. 2. Player stops his friend from leaving indoors. 3. Player tells his friend to find higher ground. 4. Player stops his friend to check if his friend got wet from the flooding before using an electrical appliance (a radio). 5. Player stops his friend from diving in to save another friend; but instead, use a kind of flotation device to save him. 6. [Continues to post disaster events.]
Scenario 3: Good Ending 3: Character survives the disaster indoors alone.	1. Player tells his friend that a storm surge isn't a big thing. 2. Player stops his friend from leaving indoors. 3. Player tells his friend to find higher ground. 4. Player stops his friend to check if his friend got wet from the flooding before using an electrical appliance (a radio). 5. Player stops his friend from diving in to save another friend. 6. [Continues to post disaster events.]
Scenario 4: Good Ending 4: Character survives the disaster outdoors after failing to drive.	1. Player tells his friend that a storm surge isn't a big thing. 2. Player tells his friend to try to run to an evacuation point. 3. Player tells his friend that it is faster to drive. 4. Player stops his friend from trying to fix a stuck car. 5. Player tells his friend to find and use a stick to safely tread the flooded road. 6. [Continues to post disaster events.]
Scenario 5: Good Ending 5: Character survives the disaster outdoors.	1. Player tells his friend that a storm surge isn't a big thing. 2. Player tells his friend to try to run to an evacuation point. 3. Player stops his friend from trying to drive. 4. Player tells his friend to find and use a stick to safely tread the flooded road. 5. [Continues to post disaster events.]

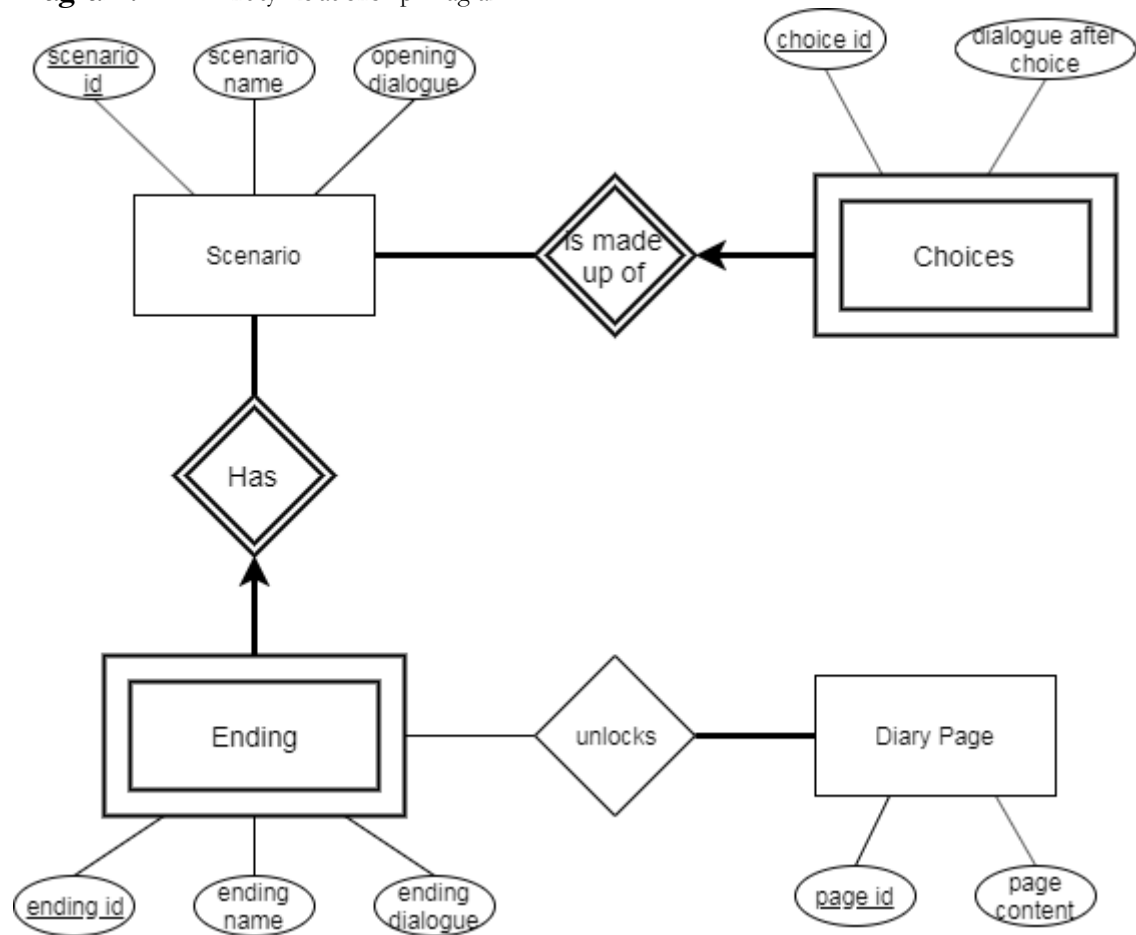
<b><i>Scenario Name</i></b>	<b><i>Description</i></b>
Scenario 6: Bad Ending 1: Character drowns in the basement.	<ol style="list-style-type: none"> <li>1. Player tells his friend that a storm surge isn't a big thing.</li> <li>2. Player stops his friend from leaving indoors.</li> <li>3. Player tells his friend to find lower ground.</li> <li>4. Water rushes in cracks and drowns your friend.</li> </ol>
Scenario 7: Bad Ending 2: Character gets electrocuted.	<ol style="list-style-type: none"> <li>1. Player tells his friend that a storm surge isn't a big thing.</li> <li>2. Player stops his friend from leaving indoors.</li> <li>3. Player tells his friend to find higher ground.</li> <li>4. Friend finds a radio.</li> <li>5. Player does nothing</li> <li>4. Friend gets electrocuted from the electrical current from the radio because he got wet from the flooding before using an electrical appliance.</li> </ol>
Scenario 8: Bad Ending 3: Character gets swept away by the flood never to be seen again..	<ol style="list-style-type: none"> <li>1. Player tells his friend that a storm surge isn't a big thing.</li> <li>2. Player stops his friend from leaving indoors.</li> <li>3. Player tells his friend to find higher ground.</li> <li>4. Player stops his friend to check if his friend got wet from the flooding before using an electrical appliance (a radio).</li> <li>5. Player convinces his friend into diving in to save another friend.</li> <li>6. Friend experiences hypothermia and dies</li> </ol>
Scenario 9: Bad Ending 4: Character dies by freezing to death.	<ol style="list-style-type: none"> <li>1. Player tells his friend that a storm surge isn't a big thing.</li> <li>2. Player tells his friend to try to run to an evacuation point.</li> <li>3. Player tells his friend that it is faster to drive.</li> <li>4. Player convinces his friend to try to get the car unstuck</li> <li>5. Friend did not have enough time to evacuate and hides away in the car.</li> <li>6. Friend freezes while inside the car.</li> </ol>
Scenario 10: Bad Ending 5: Character gets stuck and dies.	<ol style="list-style-type: none"> <li>1. Player tells his friend that a storm surge isn't a big thing.</li> <li>2. Player tells his friend to try to run to an evacuation point.</li> <li>3. Player tells his friend that it is faster to drive.</li> <li>4. Player stops his friend from trying to fix a stuck car.</li> <li>5. Player tells his friend to rush and find an evacuation zone.</li> <li>6. Friend gets stuck under the mud and drowns in the flood.</li> </ol>
Scenario 11: Bad Ending 5: Character gets stuck and dies.  (Alternate way of getting bad ending 4)	<ol style="list-style-type: none"> <li>1. Player tells his friend that a storm surge isn't a big thing.</li> <li>2. Player tells his friend to try to run to an evacuation point.</li> <li>3. Player stops his friend from trying to drive.</li> <li>4. Player tells his friend to rush and find an evacuation zone.</li> <li>5. Friend gets stuck under the mud and drowns in the flood.</li> </ol>
*Post Disaster Event 1  Good Ending: Character does not get poisoned after safely returning to his home.	<ol style="list-style-type: none"> <li>1. Player tells his friend to avoid flood waters on the way back home.</li> <li>2. Player tells the friend to check the building for property damage</li> <li>3. Player tells his friend to not eat the possibly contaminated food.</li> <li>4. Player tells his friend to wait for the OK signal from his electrician.</li> <li>5. Friend boils tap water before drinking it.</li> </ol>

<b><i>Scenario Name</i></b>	<b><i>Description</i></b>
*Post Disaster Event 2 Bad Ending 1: Character falls in a pitfall filled with water and drowns.	1. Player tells his friend that the disaster is over. It is safe to rush home as soon as possible. 2. Friend dies from drowning in a pitfall filled with water.
*Post Disaster Event 3 Bad Ending 2: Character dies from property damage.	1. Player tells his friend to avoid flood waters on the way back home. 2. Player tells his friend to not bother checking the building for damages. 3. A tree falls on the house, crushing your friend to death.
*Post Disaster Event 4 Bad Ending 3: Character dies from food poisoning.	1. Player tells his friend to avoid flood waters on the way back home. 2. Player tells the friend to check the building for property damage 3. Player tells the friend that it is ok to eat the canned food. 4. Friend eats the canned food, gets food poisoning, got sent to the hospital, and never came out.
*Post Disaster Event 5 Bad Ending 4: Character dies from an unforeseen explosion.	1. Player tells his friend to avoid flood waters on the way back home. 2. Player tells the friend to check the building for property damage 3. Player tells his friend to not eat the possibly contaminated food. 4. Player tells his friend to use the tap immediately. 5. A damage in the electrical wiring underground causes an explosion upon use of electricity. Friend dies.
*Post Disaster Event 6 Bad Ending 5: Character dies from a new water borne sickness.	1. Player tells his friend to avoid flood waters on the way back home. 2. Player tells the friend to check the building for property damage 3. Player tells his friend to not eat the possibly contaminated food. 4. Player tells his friend to wait for the OK signal from his electrician. 5. Player tells his friend to drink from the tap directly. 6. Friend caught some deadly waterborne disease and dies.
Scenario 12 Player doesn't finish the scenario	1. The story won't progress 2. The player won't be able to unlock diary pages. 3. The player won't be able to proceed to the other scenarios.

**Activity Diagram of the Flow of Events:**  
 (\*note diagram is rotated because it won't fit horizontally)



**Other Diagram:** Entity-Relationship Diagram



**Postcondition:** NONE

**Relationships:**

1. has
  - each scenario has one or more endings and each ending may only be connected to one scenario (i.e.: an ending in the fire scenario won't be seen in the earthquake scenario)
  - weak entity relationship between scenario and ending
2. is made up of
  - each scenario is made up of one or more choices and each choice may only be connected to one scenario (i.e.: a choice in the fire scenario won't be seen in the earthquake scenario)
  - weak entity relationship between scenario and choices
3. unlocks
  - endings may or may not unlock one or multiple diary pages and diary pages can be unlocked by a minimum of one ending

**Special Requirements:**  
NONE