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DEPARTMENT OF COMPUTER ENGINEERING



SOFTWARE REQUIREMENTS SPECIFICATION
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afetbilgi.com

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1 Introduction

This document is the Software Specification Requirement (SRS) of a website designed to help earthquake victims to acquire necessary information and give volunteers a chance to donate for helping earthquake victims. The website is called afetbilgi.com developed by Middle East Technical University (METU) students and graduates.

1.1 Purpose of the System

afetbilgi.com , direct translation to English is ‘disaster documentation’, is an open source efforted project led by students from METU in Ankara, Turkiye. It aims to provide a clean, verified and properly classified information interface for earthquake victims and helpers alike in the aftermath of the unfortunate earthquake on the February 6th, 2023 in Pazarcik, Turkiye. Not only that, but it offers quick information with the use of confirmed website links, maps and address tables along with the relevant contact details of organisations and helpers involved.

1.2 Scope

afetbilgi.com was established to offer as much information as needed by users in three main categories:

- People who are affected by the earthquake (the victims).
- Individuals/Organisations who want to help and take part in other government/private efforted procedures in the affected areas.

- People from METU who verify and checked any presented links on the websites.

The website at its core is primarily responsible for providing tables and datasheets with website links to third-party organisations/contacts details of web places/physical locations which offer/collect help. As indicated here, these links are external and lead out to other websites(outside from afetbilgi.com) whose efforts are verified by human resolves (METU students/helpers/site administrators) on the surface level using past experience.

Given how the world is connected with the use of the internet in addition to phones/televised communication, the project developers aim to create a website using these advantageous characteristics via a simple interface in multiple available languages to create fast and easy use of information with no additional and unnecessary obstacles. In areas with a lack of internet infrastructure which might have disturbed by the earthquake activities, the website can be distributed via printed out PDFs (shareable via common computers and mobiles as well in addition to hand forwarded physical versions in the forms of leaflets and so on).

Lastly, afetbilgi.com includes a map functionality if the victim/helper indeed has an internet connection. Any user can locate helper geolocations via terrain/road routes while also be able to quickly view extra details such as written addresses, contact phone details and previous reviews.

1.3 System Overview

1.3.1 System Perspective

afetbilgi.com [1] is not a part of a larger system. It is a standalone and open

source efforted website to verify important information in the fight against the 6 February 2023 Pazarcik Earthquake and to deliver it to both disaster victims and those who want to help in an understandable, concise manner in multiple languages.

This information is presented in either the form of legible tables with 3rd party governmental and private links or an interactable method via a map view interface. If deemed necessary, admin and maintainers can make changes to display newly created or edited data and upload it to the system upon any complains or suggestion they may get on their contact details.

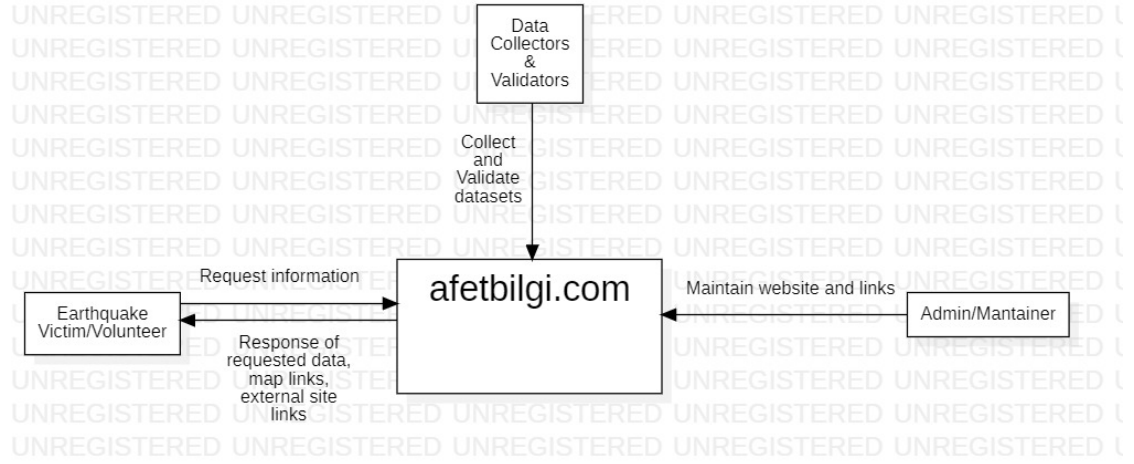


Figure 1: Context Diagram for afetbilgi.com

1.3.2 System Functions

1.3.3 Stakeholder Characteristics

1.3.4 Limitations

1.4 Definitions

2 References

This document is prepared with respect to IEEE 29148-2011 [2] standard.

References

- [1] A. B. İşlem Merkezi, *Afetbilgi — afetler hakkında doğru ve güncel bilgiler*, <http://www.afetbilgi.com/>, February, 2023.
- [2] IEEE, “29148-2011 - iso/iec/ieee international standard – systems and software engineering – life cycle processes – requirements engineering,” IEEE Standards Association, Standard, 2011. DOI: 10.1109/IEEESTD.2011.6146379. [Online]. Available: <http://ieeexplore.ieee.org/document/6146379/> (visited on 04/12/2023).

3 Specific Requirements

3.1 External Interfaces

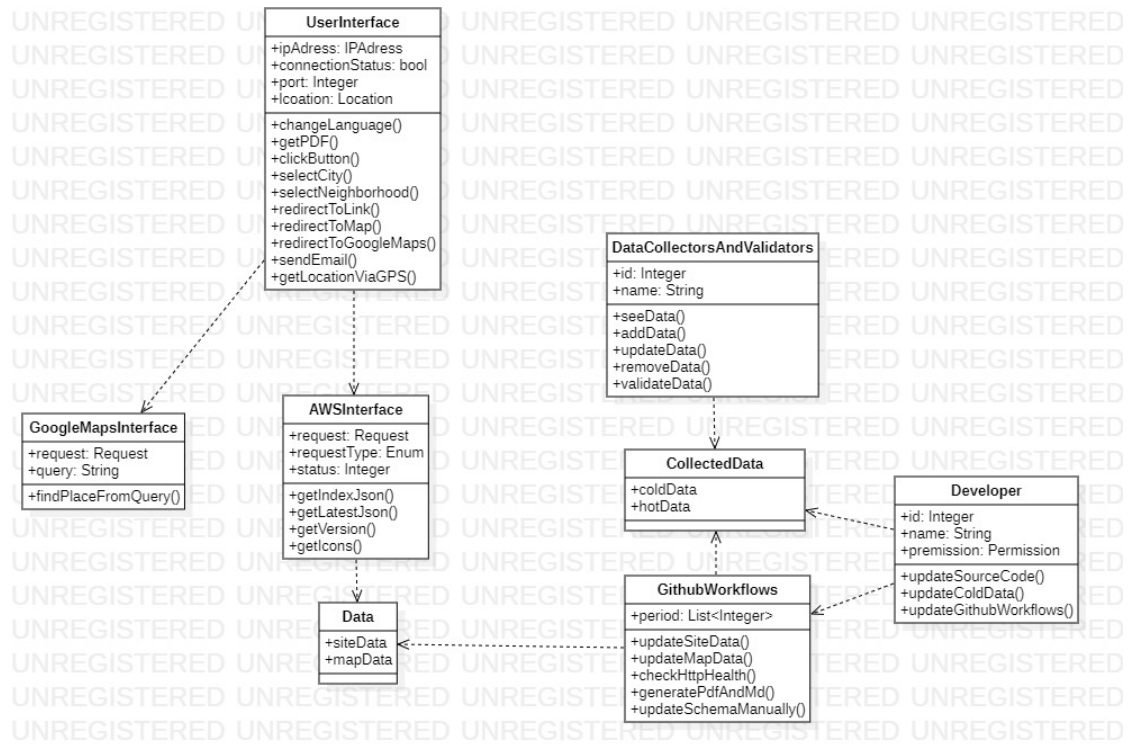


Figure 2: External Interfaces

3.2 Functions



Figure 3: Use Case Diagram for afetbilgi.com

Use Case ID	0
Use-Case Name	Donate or Help
Actors	Volunteer or Helper and Website maintainers
Description	Whenever a site user wants to donate or help earthquake victims, he or she can view verified and updated institutions and organisations, which he or she can donate to, on the website to donate to
Data	Verified and updated directory of external 3rd party links of welfare and governmental organisations
Preconditions	The directory must be updated and verified regularly given the potential monetary usage of the links in the future by the users
Stimulus	User clicks on the relevant donation/help methods listed as bold text buttons in the “To Help” category on the website
Basic Flow	<p>Step 1: User clicks on “Digital solidarity campaigns”</p> <p>Step 2: User selects any of the presented external-3rd party links(presented in a directory)</p> <p>Step 3: User redirected to verified 3rd party website</p>
Alternative Flow #1	<p>Step 1: User clicks on “Other donation”</p> <p>Step 2: User selects relevant city</p> <p>Step 3: User selects verified helper links of individuals/smaller organisations along with their contact details</p> <p>Step 4: User clicks on any link and escorted out to a 3rd party site</p>
Alternative Flow #2	<p>Step 1: User clicks on “Kizilay Blood Donation Places”</p> <p>Step 2: User automatically redirected to primary verified 3rd party site of governmental organisation accepting blood donations</p>
Exception Flow	-
Post Conditions	User is redirected to a verified external website out of the afetbilgi.com domain

Table 1: Use Case - Donate or Help

Use Case ID	1
Use-Case Name	Access open maps
Actors	Volunteers or Victims, Website maintainers
Description	Users can view current location with respect to places in need of help and use interactive map view to track down relevant places offering help (verified by site maintainers) via GPS location
Data	Interactive Map View with relevant place descriptions to navigate on
Preconditions	Places ought to be verified, properly categorised and color coded for easy understanding by site user
Stimulus	User drags mouse around on map view involving GPS after clicking on the map button anywhere on screen or calling <code>maps.afetbilgi.com</code> directly in the browser
Basic Flow	<p>Step 1: User is shown his current location with respect to rest of Turkey</p> <p>Step 2: Users can zoom in or out of Turkey's map and track themselves to needy areas as per color codes and categorisation</p> <p>Step 3: User can click on a tracked down helping house, restaurant, etc. and be greeted by a pop up box with description and relevant links to third party sites or Google Maps routes</p> <p>Step 4: User can click on the links and escorted out to 3rd party websites or Google Maps website</p>
Alternative Flow #1	<p>Step 1: User can select zoom in or out along with clicking on the camera icon</p> <p>Step 2: User can save map screenshot for later use or distribution</p>
Alternative Flow #2	-
Exception Flow	-
Post Conditions	User ends up on verified external website outside of afet-bilgi.com domain

Table 2: Use Case - Access open maps

Use Case ID	2
Use-Case Name	Generate PDFs to distribute website
Actors	Volunteers or victims
Description	Users can save filtered out website directories for later use given possible lack of electrical or network necessities in these earthquake stricken areas
Data	Separate downloadable PDF documents after selecting relevant cities
Preconditions	User is able to select entire cities with verified directory links and contact information
Stimulus	User clicks on PDF icon button anywhere on the website
Basic Flow	<p>Step 1: User clicks on PDF icon anywhere on website</p> <p>Step 2: User selects city</p> <p>Step 3: Document is loaded and enabled for download by the user with the relevant city and categories highlighted on it</p>
Alternative Flow #1	-
Alternative Flow #2	-
Exception Flow	-
Post Conditions	Site user has received well formatted and legible generated PDF document with relevant hyperlinks and contact details of verified directories

Table 3: Use Case - Generate PDFs to distribute website

3.3 Usability Requirements

3.4 Performance Requirements

3.5 Logical Database Requirements

afetbilgi.com does not currently have any relational database. To acquire the required data for both site and maps, it gets a JSON file from AWS and the code of website parses this JSON file according the path and the chosen option. For this purpose, it uses axios to send `GET` request to the `cdn.afetbilgi.com/latest.json`. This request returns the `latest.json` file, which includes all the data required in the website. Although it may have drawback such as long load time, it may have advantages such as not loading any data after initial load.

To parse and upload the JSON file into the AWS, Github Workflows are used. Github Workflows parse and upload the `latest.json` by using the data, which collectors and validators collect and validate, periodically.

The relations between objects in the JSON file is shown at Figure 4. The code use these relations to parse the JSON correctly and show the included information in the JSON. If the system is updated to a relational database, the database can use the relations at the Figure 4.

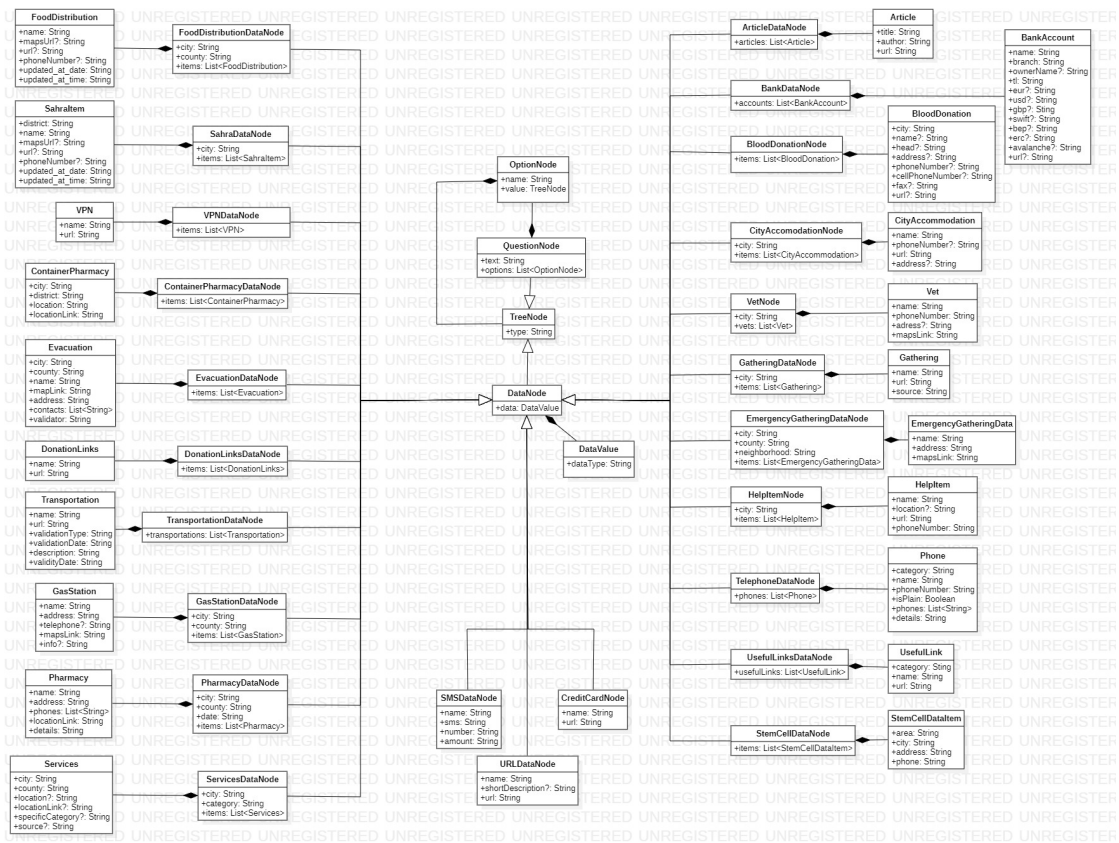


Figure 4: Possible Relational Database

3.6 Design Constraints

3.7 System Attributes

3.8 Supporting Information

4 Suggestions to Improve the Existing System

4.1 System Perspective

4.2 External Interfaces

4.3 Functions

4.4 Usability Requirements

4.5 Performance Requirements

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