

# **EULAide: Ontology-Driven Summarization and Visualization of Legal Documents**

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# Outline

- ① Project Overview
- ② System Architecture
- ③ Implementation
- ④ Project Result
- ⑤ System Evaluation and testing
- ⑥ Poster
- ⑦ Future Work

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# Current Problem

- **EULAs** appear when installing a software or signing up for a web service.
- They are legally binding and thus should be read with caution,
- but users have a habit of clicking “**I agree**”
- Possible consequences include:
  - **Privacy compromise**
  - **security risk**
  - **legal action against user**



# Objective

Use ontology-based information extraction to facilitate a better understanding of EULAs.

# Tasks

- Semantification of an EULA
- Summarization
- Annotation Classes
- Web GUI
- Handle exceptions

# Technology Tools



**AngularJS** for front-end  
JavaScript



**Bootstrap** for front-end  
design



**Jersey** for RESTful Web  
Service



**GATE** for ontology-based  
information extraction



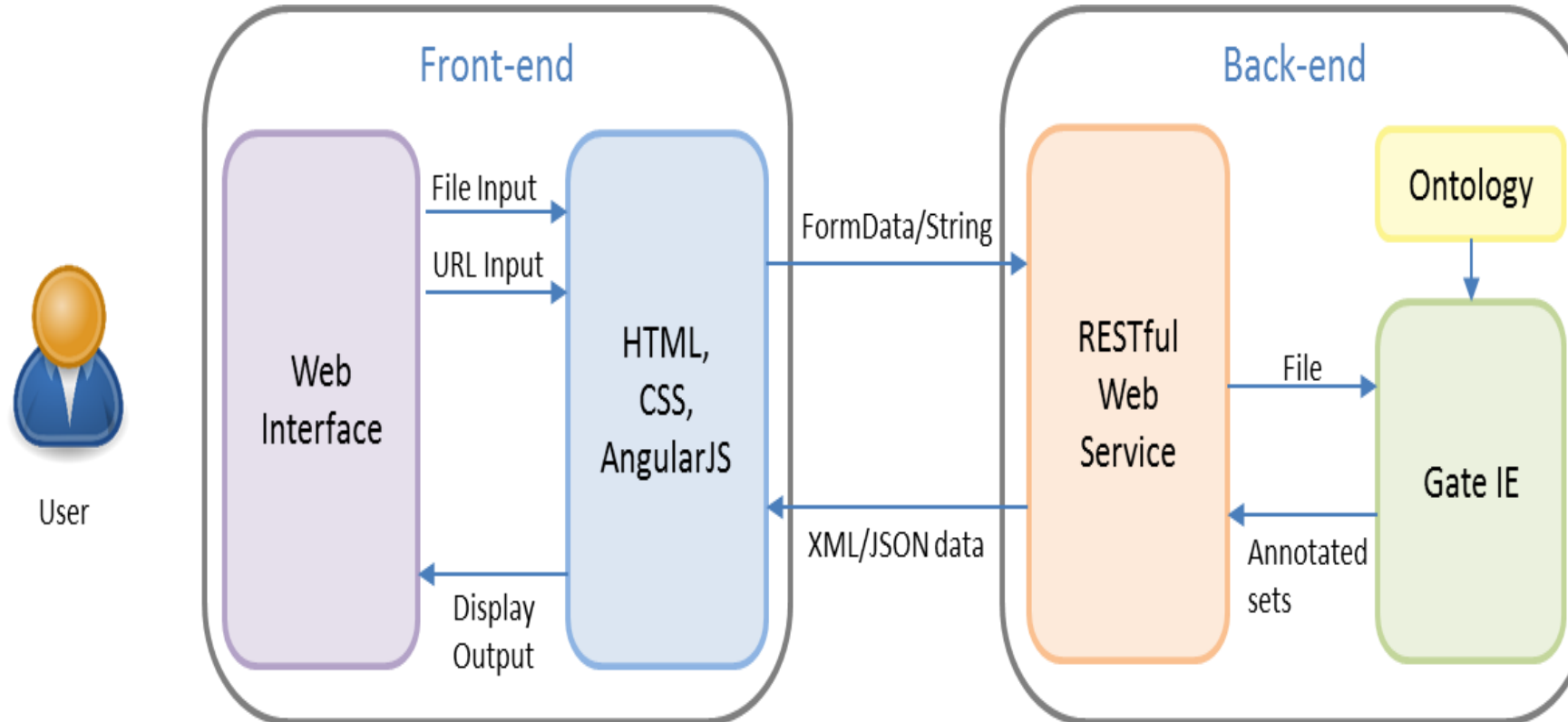
**Jasmine & Postman**  
for testing

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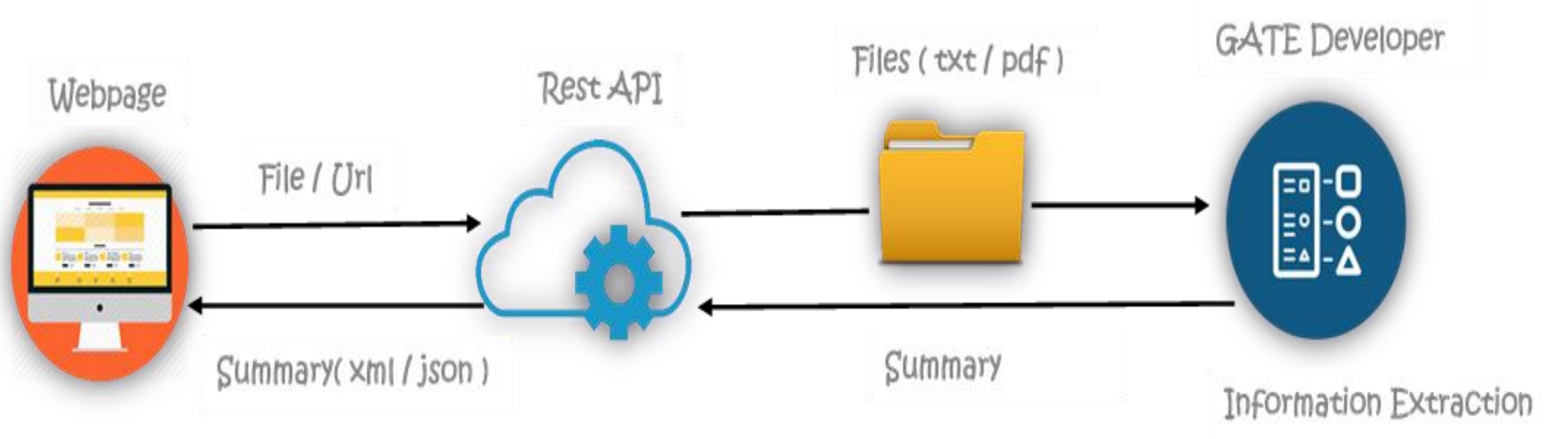
# System Architecture



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# Implementation



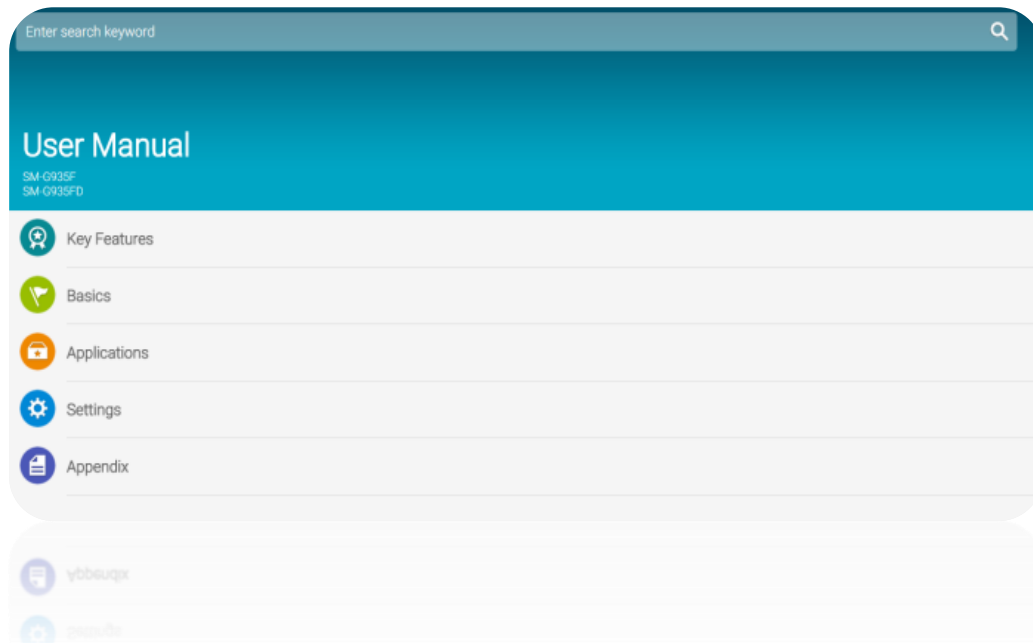
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# End-user Manual

- To help end-user to be able to use the system
  - Demo
  - Help User Page



# Demo



Hostname: **vm-Windows16-EULA**

Software installed: Installed on: EIS3

Eclipse Neon, Apache Tomcat 9, GATE 8.1

## Local Access:

OS User: **eis-user**

Password: **E1sUserEULA**



## Remote Access:

Partner ID: **273956668**

Password: **E1sUserEULA**

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# System Evaluation

## ○ Performance testing

- In the preamble of this project, 20 well-known EULAs were provided to test EULAide from local disk.
- They produced desired outputs of annotation sets (prohibition, duties and permissions) successfully with a response time of less than five seconds



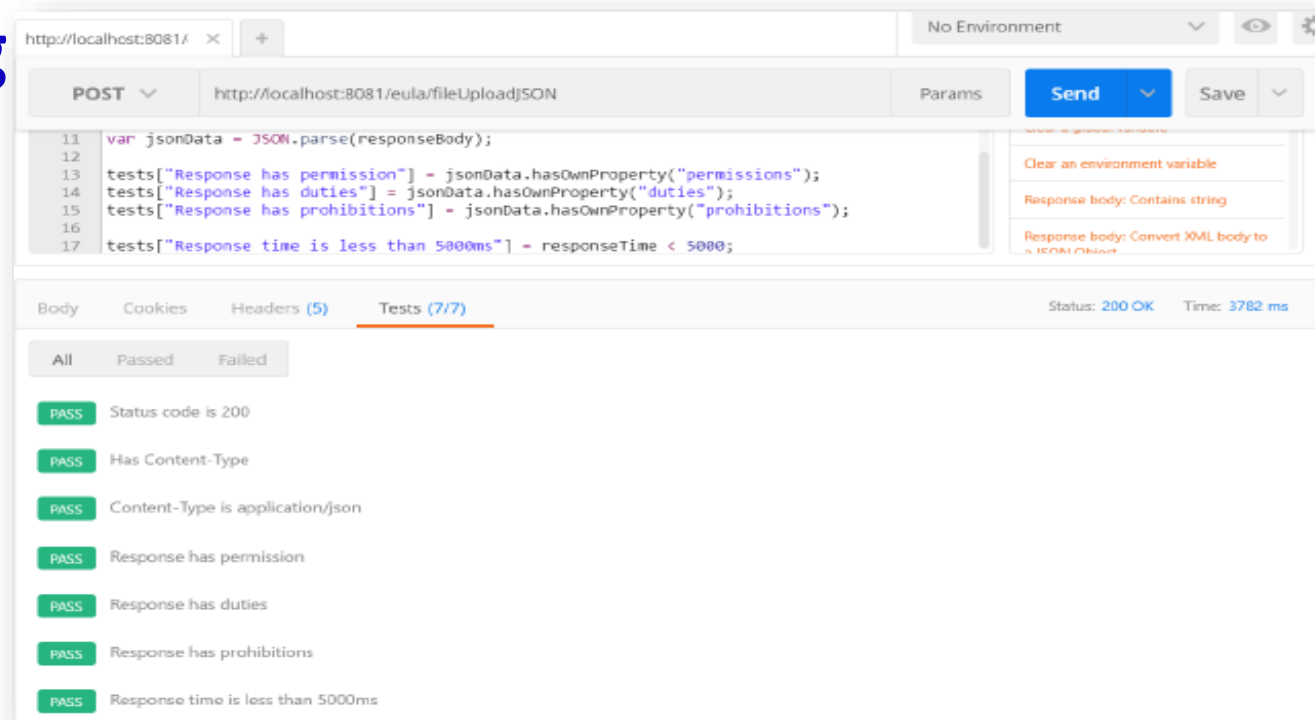
# Testing

## ○ Unit testing

The following tests were done:

- File validation with right format (.txt, .pdf) and also with wrong format (.jpg or any other types) has been tested and succeeded.
- URL validation with empty URL or non-empty URL has been tested.

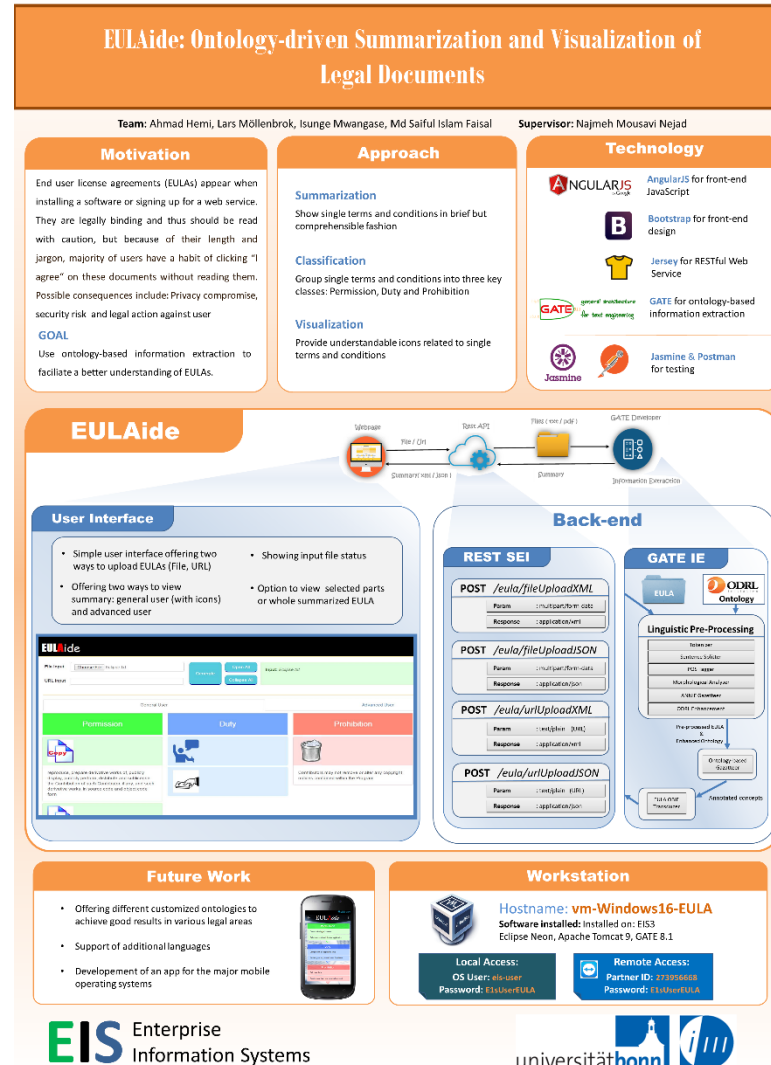
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# Project Poster



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# Future Work

- Offering different customized ontologies to achieve good results in various legal areas
- Support of additional languages
- Developement of an app for the major mobile operating systems

