IOWA STATE UNIVERSITY
College of Engineering

Text extractions from documents into Elasticsearch

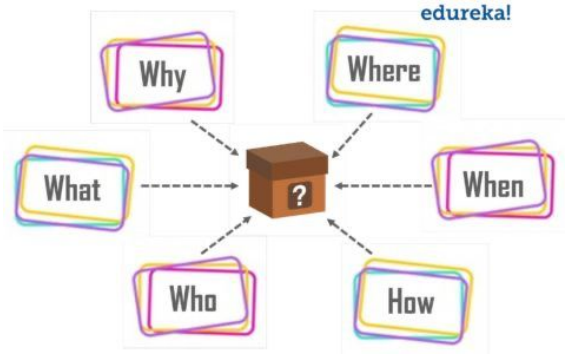
Team Members:

Project Testing Presentation

BUILDERTREND

Test Plan

- A Testing plan is an extremely important component of most projects (circuit, power system, software)
- Discuss Testing Methods/Strategies
- Connect design and requirements to testing methods
- Discover, analyze, and mitigate risks and issues



Unit Testing

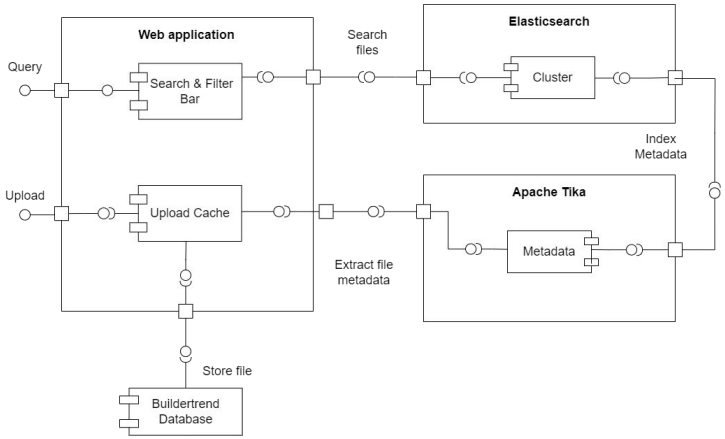
- Web Application
  - Components (e.g. Search bar, filters, upload, etc.)
- Tika Text Extractor
  - Metadata extraction
  - File identification
- Elasticsearch Handler
  - Indexing of metadata
  - Searching nodes

Interface Testing

- Web Application to Elasticsearch Handler
  - Fetching/Retrieving query data
- Web Application to Tika Text Extractor
  - Sending uploaded file for metadata extraction
- Tika Text Extractor to Elasticsearch Handler
  - Inserting metadata into Elasticsearch

Integration Testing

- Ensures components of systems work as expected when they are combined to produce a result
- Incremental Integration Testing
- Frontend UI <--> Elasticsearch
  - Terms lookup
  - Filtering
  - Latency analysis
- Elasticsearch <--> Tika backend
  - File indexing and data aggregation
- Frontend <--> Upload Cache <--> Files DB



System Testing

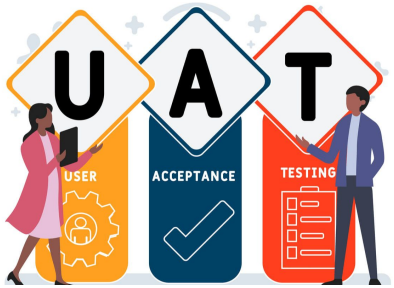
- Fulfilled by Unit and Integration testing
- Three major components:
  - Web Application
  - ElasticSearch Handler
  - Tika Text Extractor
- Unit testing tests for individual functionality
- Integration testing tests the communication between the three components

Regression Testing

- New features shouldn’t break old functionality
- Enhance user experience instead
- Critical features:
  - Web application
  - Elasticsearch Handler
  - Tika Text Extractor
- Unit and integration testing on critical components
- Add new feature and test functionality

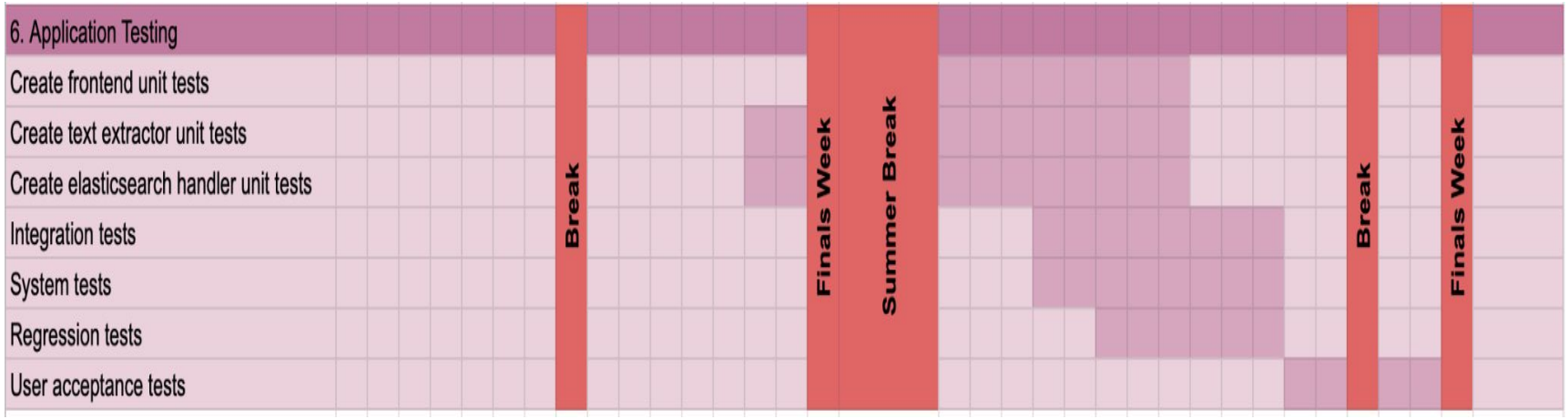
Acceptance Testing

- Ensures the software meets the requirements of clients and users
- Iterative feedback-approach
- MVP- web search application, showcasing requirements and features
- Clients + real-world usage feedback



Security Testing

- N/A to our project
- Just a proof of concept
- Expect BuilderTrend to do it

Results

- No results yet
- Plan for next semester