

Eagna – General Overview

Technology Stack

Frontend: HTMX

Backend: Django

Caching: Redis

Database: PostgreSQL

Monitoring: Prometheus / Grafana

Infrastructure: VirtualBox / Azure

Management: Minikube / Kubernetes

System Flow

Student

- Open Webpage
 - Register
 - Enter First Name
 - Enter Second Name
 - Enter Student Email
 - Enter Password
 - Re-enter Password
 - Select Course
 - Select Year
 - If chosen year contains optional modules:
 - Outline Available Modules
 - Ask them to select Modules
 - If it does not:
 - Assign them necessary modules
 - Login
 - Enter Student Email
 - Enter Password
- Logged In
- Header
 - TUD Logo
 - Notifications
 - Learning Material
 - Content Uploaded By Lecturer
 - Assignment Uploaded By Lecturer
 - Due Notification
 - Assignment Due in 1 Week
 - Assignment Due in 3 Days
 - Assignment Due in 24 Hours
 - Grade Notification
 - Grade Released
 - Grade Updated

- Upcoming Meeting
 - Integration With Teams Calendar
- User
 - Personal Profile (Not Public)
 - Name
 - Student Number
 - Course
 - Year
 - Average Grade
- Nav Menu
 - Home
 - Progress
 - Year
 - Module
 - X/X Assignments Completed
 - Calendar
 - Due Dates For Assignments
 - Upcoming Meetings
 - Integration With Teams
 - Help
 - How To Use
 - Accessibility Options
- Content
 - Modules
 - Select Module
 - Module Page
 - Navigation
 - Module Home
 - Module Information
 - Module Schedule
 - Weekly Dividers
 - Files
 - Notes
 - Videos
 - etc.
 - Assignments
 - Due
 - Date
 - Completed
 - Grade
 - Virtual Class
 - Integration With Teams
 - Assignments Due (Global)
 - Global Announcements
- Footer
 - Accessibility Options
 - Colour Scheme

Lecturer

- Open Webpage
- Log In
 - Username
 - Password
- Logged In
- Header
 - TUD Logo
 - Notifications
 - Assignment Notification
 - Assignment Uploaded By Student
 - Upcoming Notification
 - Assignment Due in 1 Week
 - Assignment Due in 3 Days
 - Assignment Due in 24 Hours
 - User
 - Personal Profile (Not Public)
 - Name
 - Lecturer Email
 - Modules Taught
 - Nav Menu
 - Home
 - Progress
 - Year
 - Module
 - X/X Assignments Graded
 - Calendar
 - Due Dates For Student Assignments
 - Upcoming Meeting
 - Integration With Teams Calendar
 - Help
 - How To Use
 - Accessibility Options
- Content
 - Modules
 - Select Module
 - Module Page
 - Navigation
 - Module Home
 - Module Information
 - Ability To Edit
 - Module Schedule
 - Will Include Assignments Created (Due Dates)
 - Upcoming Teams Meetings
 - Weekly Dividers
 - Sub-heading Editable
 - Files Uploadable

- Notes
 - Videos
 - etc.
- Assignments
 - Create
 - Title
 - Description
 - Rubric
 - Associated Files
 - Virtual Class
 - Integration With Teams
 - Ability To Create Meetings
- Upcoming Assignments Due for Students (Global)
- Global Announcements
- Footer
 - Accessibility Options
 - Colour Scheme

Admin

- Restricted Access to Metrics
 - Current Online / Offline Status
 - Current Active Users
 - Current Load On System
 - Read / Write
 - Memory Usage
 - Storage Usage
 - Etc.
- Restricted Access to Web Application
 - Ability to create global announcements
- Restricted Access to Database
 - Ability to fix issues made from registration
 - Move students to different courses / modules
 - Move lecturers to correct modules