HIGH LEVEL DOCUMENT

Project Title : Tuber

Organisation: iNeuron Private Limited

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Abstract

“XYZ Pvt Ltd” is an Edtech organisation with the vision of providing courses at an affordable price. Initially "XYZ Pvt Ltd" started providing professional training in the field of Artificial intelligence and Data Science, with trending demands of other technologies such as blockchain and full stack web development. To facilitate professionals training in trending technology "XYZ" has on boarded many educational youtuber to bring revolutionary improvements . Tubers platform helps "XYZ Pvt Ltd" management team to engage youtubers and students to connect with each other.

1. Introduction

1.1. Why this High-Level-Document?

The purpose of this High-Level-Document is to add the important details about the project description to represent a suitable model and coding for application. This document is also intended to help detect contradictions before coding and can be used as a reference manual to interact at high level.

The HLD will include below detail:

- Present all of the design aspects and define them in detail.
- Describe how the user interface is implemented.
- Describe the hardware and software interfaces.
- Describe the performance requirements.
- Include design features and the architecture of the project.
- List and describe the non-functional attributes such as security, reliability, maintainability, portability, reusability, application compatibility, resource utilisation and serviceability.

1.2. Scope

The HLD presents the structure of the system, such as the database architecture, application architecture (layers), application flow (Navigation), and technology stack. The HLD uses non-technical to mildly-technical terms which should be understandable to the administrators of the system.

1.3. Definitions

Term	Description
DevOps	Development Operations
Database	Storage of data generated by system such as project data and project logging and monitoring data
IDE	Integrated Development Environment (Complete project development will be done using IDE)
Django	Django is a Python-based free and open-source web framework that follows the model–template–views architectural pattern.
Python	Python is a high-level, general-purpose programming language.

2. General Description

2.1. Product perspective

The Tuber platform will have admin and normal users. Any normal user can be a student or professional who has purchased courses from “XYZ Pvt. Ltd.”. Tuber platform provides functionality for students to connect with tech youtubers on board by “XYZ Pvt. Ltd.”. Students can check the profile of all hired tech youtuber along with their details. They can search youtuber and even apply filters based on different criteria such as city, camera type and category. Admin portal will be managed by “XYZ Pvt. Ltd.” management employee. Youtubers can only be hired by a user with admin access. Portal facilitates social logging functionality for students to register themselves at tuber platform.

2.2 Tool used

1. Whimsical: A web application used to generate all of the diagrams used in analysis and design phases of the project.
2. The project will have a relational database backend that is SQL based. The actual software used is Postgresql.
3. Interfacing with the database to display information on the web browser will be done using Django. Django is a python based web framework used to create web applications using MVC architecture.
4. GitHub is used as a version control system.

5. Front end development using HTML/CSS/Bootstrap.
6. VS Code/ PyCharm are used as an IDE.

2.3 General Constraints

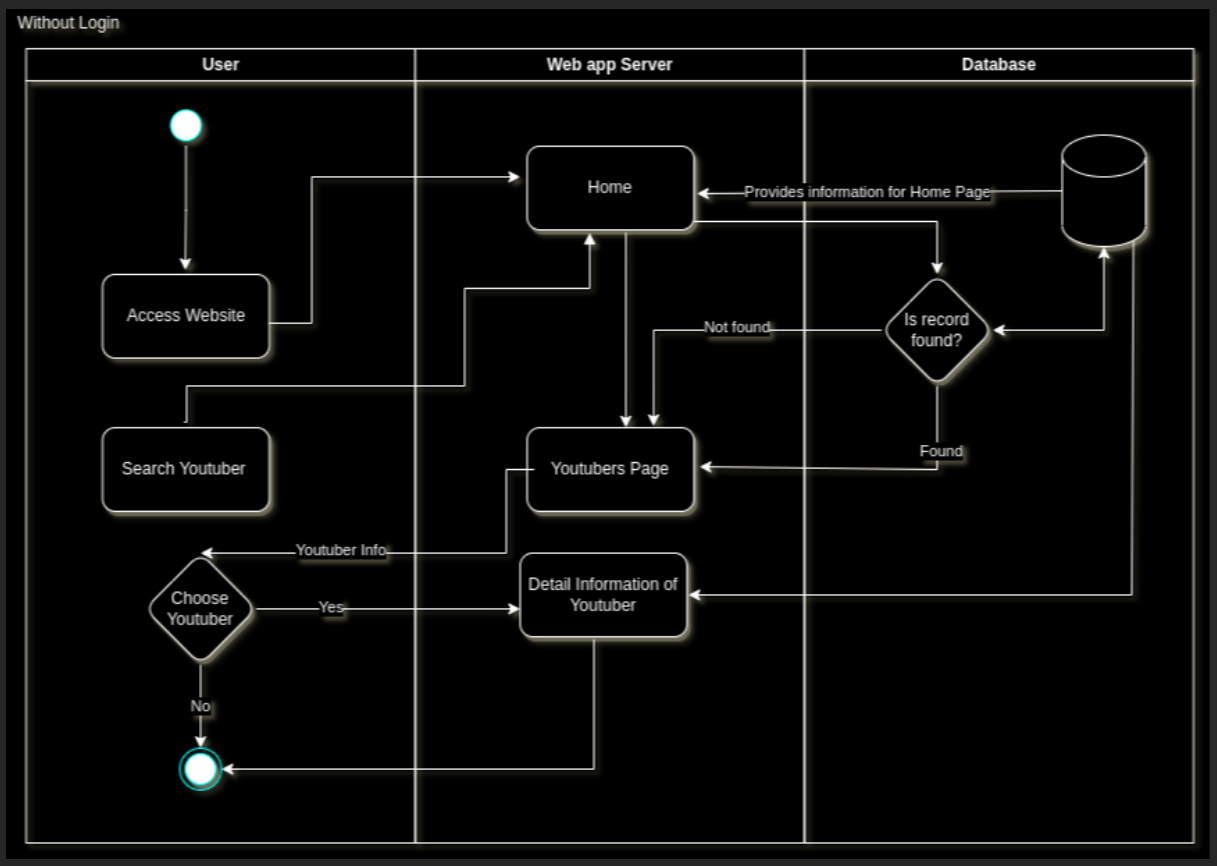
Tuber should be user friendly and as automated as possible. Admin manual tasks should be minimised as much as possible. Users should be able to submit contact forms for their favourite tech youtubers.

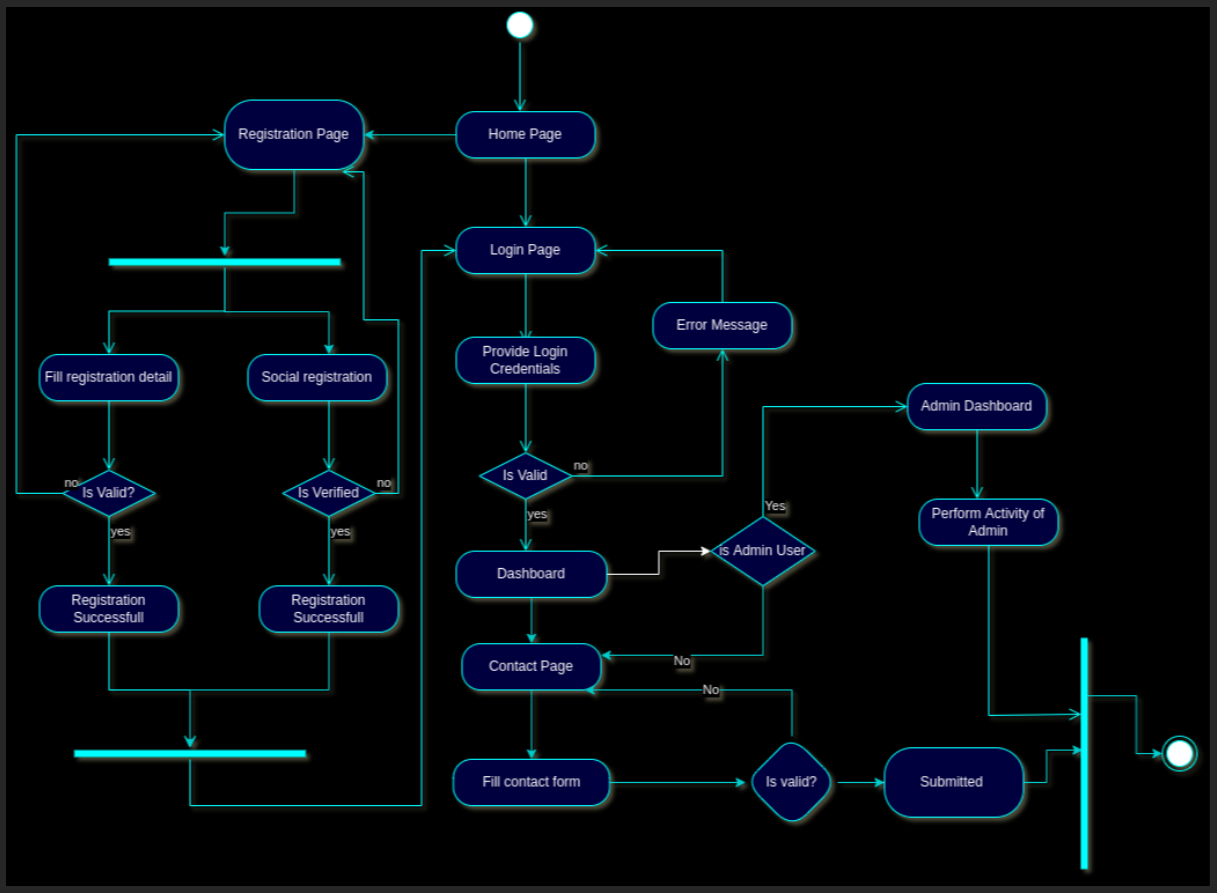
2.4 Assumption

The project idea is very simple. Objective is to make the Tuber idea a reality using Software Engineering practices. All documents created during the initial phase have been inspected and flaws have been identified and resolved. Individual components will work together. Every day scheduled backup is configured so in case of failure it can be restored. All developers will be healthy until the project is finished. In case of abnormal situations we can hire new developers and we are also maintaining proper documentation and standards so that new developers can easily be involved.

3. Design Detail

3.1. Application Flow





3.2. Event Log

Logging helps us to tackle many hardle which may occur in future due to abnormal conditions. Logging helps us to perform, track, audit and even monitor business/developers can use this logged information for future enhancement for user experience optimization.

1. The System should be able to log each and every system flow.
2. Developers can choose logging methods. You can choose database logging/ File logging as well.
3. System should not hang even after using so many loggings. Logging just because we can easily debug issues so logging is mandatory to do.

3.3. Error handling

Logging helps us to investigate exceptions that occurred due to certain events. Exception handling should be implemented in such a way that it can capture any important log detail occurred by any exception event. Captured information can be used to investigate and mitigate such events in future.

3.4. Performance

Performance is going to be very important for this project. For everything to run smoothly for this project, all database related functionality should work properly. Database must be available 24 X 7 and reachable. Because many aspects of the UI are controlled by the database. The database server needs to keep up with all requests and transactions.

3.5. Re-usability

We have followed industry standards while coding and also maintained an object oriented programming approach so in future you can change components or add without any issues. We have created multiple apps in django in the future and can also be added easily with any major hurdle.

3.6. Application Compatibility

This application is compatible with python 3.7 and above, versions of required libraries are mentioned in the pipenv.txt file which users can look and twick accordingly. Code is compatible with both Windows and Linux operating systems. Development system was Windows 11 while the Testing Environment was ubuntu.

3.7. Resource Utilisation

Code is written with proper optimization with the aim in mind to use less resources and perform better. Code to access Database is written with functionality to remove data from if needed.