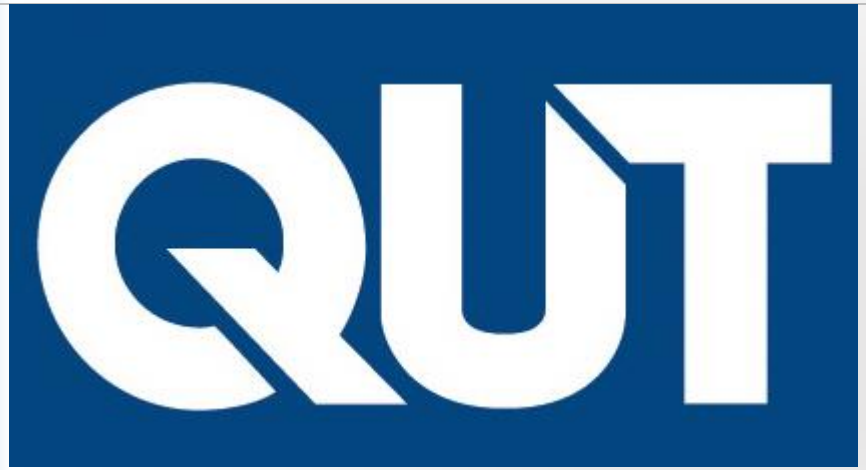

IFB299 – IT PROJECT DESIGN & DEVELOPMENT

Three-Tier Architecture Pattern

ABSTRACT

This document represents the three-tier architecture pattern and database physical diagram, logical diagram, component diagram and data flow diagram of my music school's website and database system.

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Three-Tier Architecture Pattern

A three-tier architecture pattern was selected for the music school project. A three-tier architecture pattern comprises of three layers: The Presentation/UI layer, Business Logic layer, and Database layer.

Three-tier architecture pattern produces a logical separation between the business layer, presentation layer and database layer, while each tier is independent of each other and can scale horizontally, three-tier permits the parallel development of each tier by the used of different sets of developers. The migration is much faster in the new graphical environment and the database security is provided by the application because application layer is situated between the database layer and presentation layer, leaving the client without direct access to the database.

Clients e.g. students and teachers will access the website through the presentation/UI layer. The UI is rendered by HTML and CSS. Functions or methods involved for the website such as login compose the Business Logic Layer. The Business Logic layer will utilise the Django Framework. A database will also be needed to store and retrieve data for the presentation and business logic layer.

Logical Diagram

Figure 1: Logical Diagram

Physical Diagram

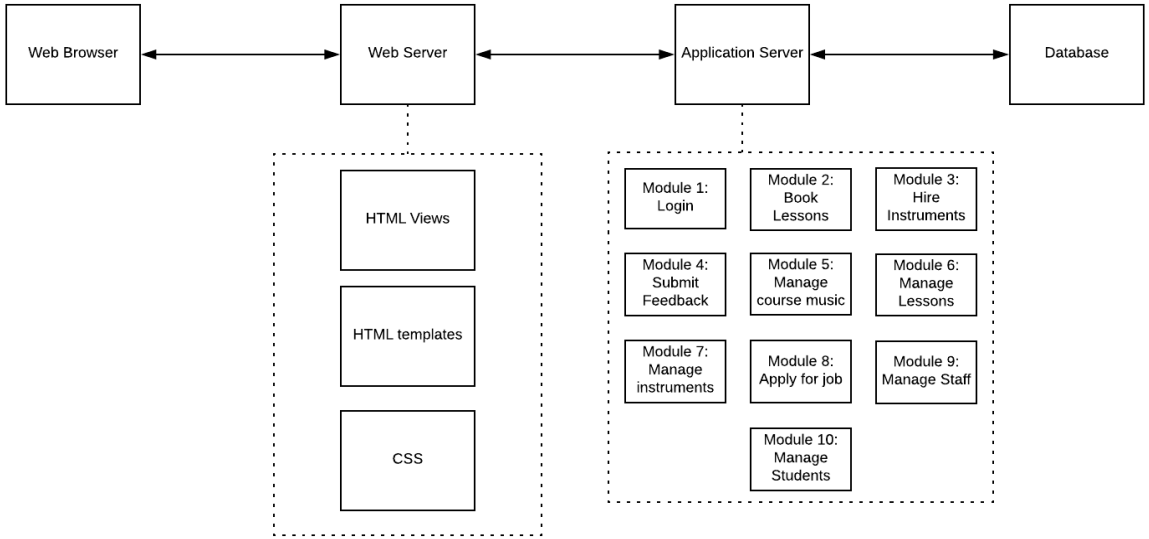


Figure 2: Physical Diagram

Component Diagram

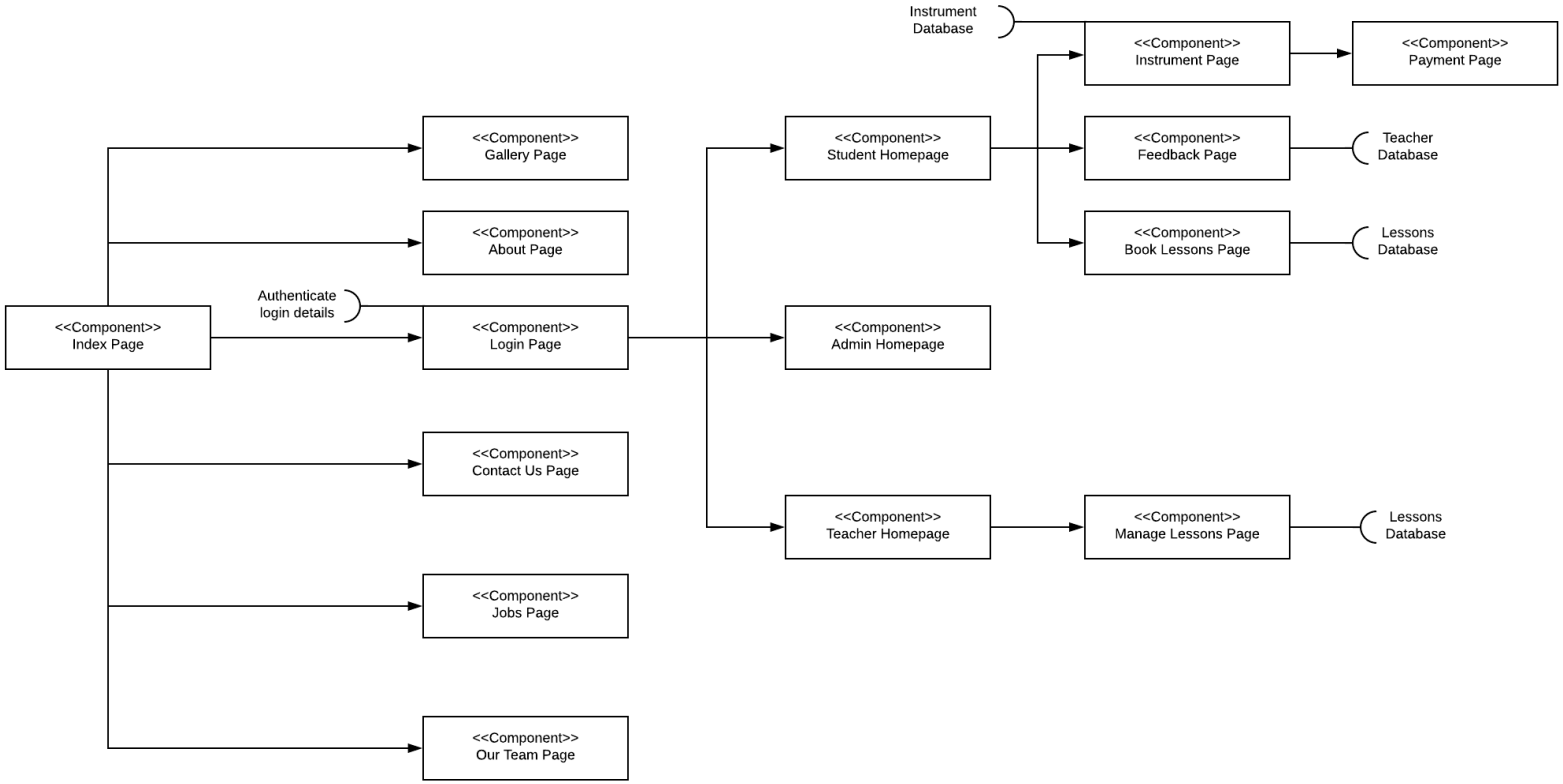
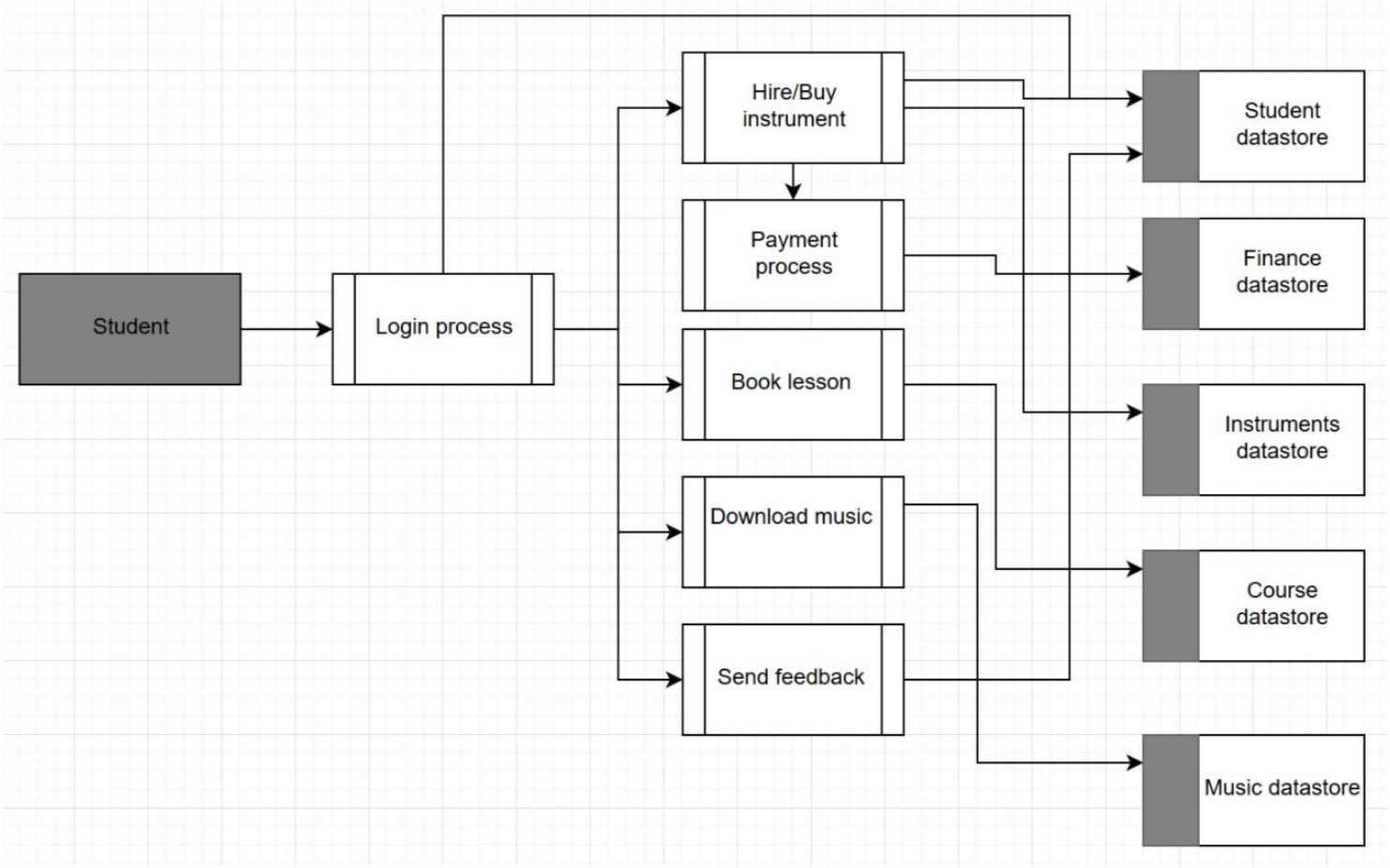


Figure 3: Component Diagram

Data Flow Diagram



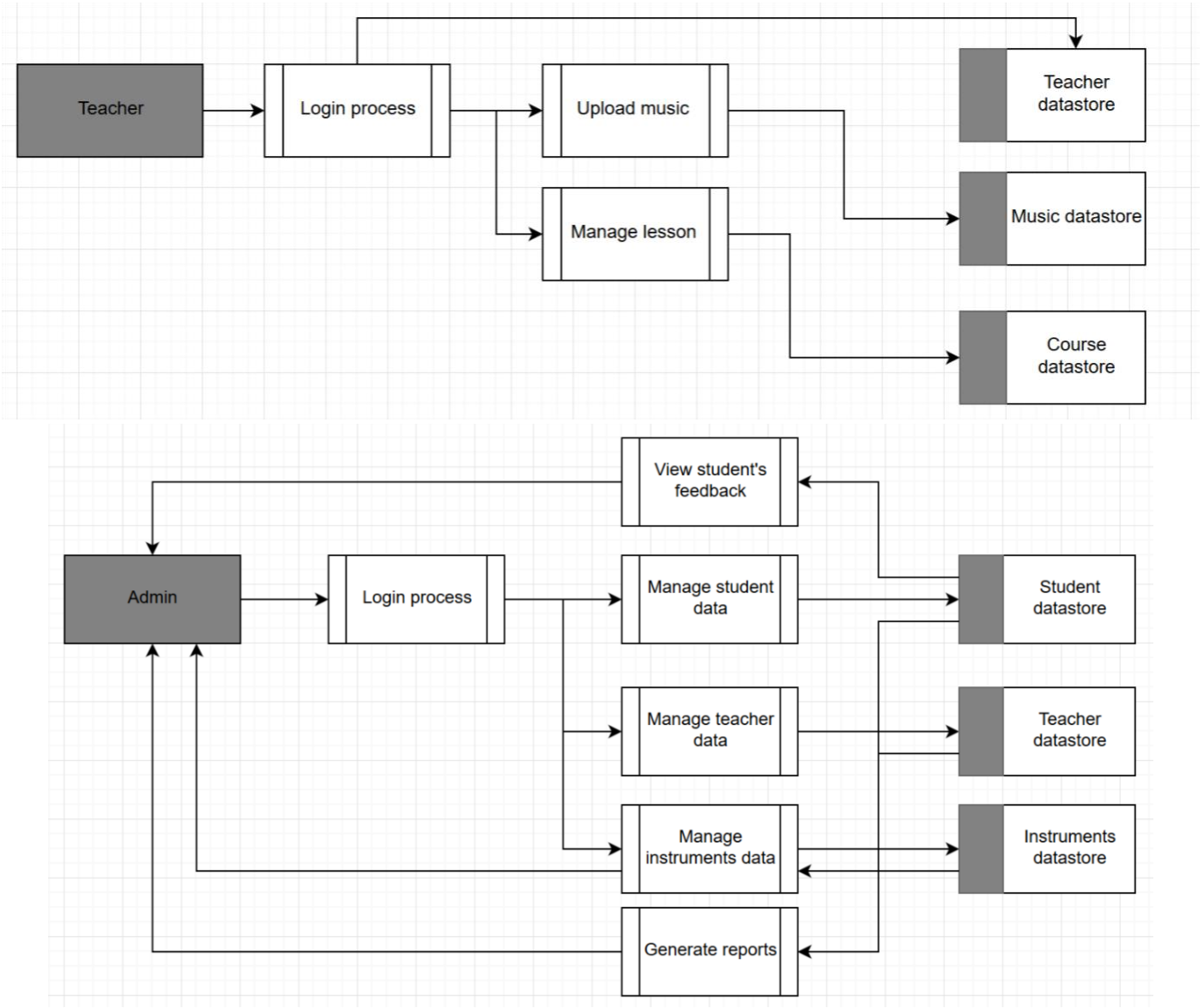


Figure 4: Data Flow Diagram