

Idea Engine

Architecture/Design Document

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Change History

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1 Introduction

The Idea Engine Architecture document gives logical insight to the different components of the system. This document gives a high-level view of all system hierarchy, logical views, and controlling views for system users.

Here the architecture of the Idea Engine application is described from 4 different perspectives [1995 Krutchen]:

1. Logical View – major components, their attributes and operations. This view also includes relationships between components and their interactions. When doing OO design, class diagrams and sequence diagrams are often used to express the logical view.
2. Process View – the threads of control and processes used to execute the operations identified in the logical view.
3. Development View – how system modules map to development organization.
4. Use Case View – the use case view is used to both motivate and validate design activity. At the start of design the requirements define the functional objectives for the design. Use cases are also used to validate suggested designs. It should be possible to walk through a use case scenario and follow the interaction between high-level components. The components should have all the necessary behavior to conceptually execute a use case.

2 Design Goals

Idea Engine design priorities:

- The design should minimize complexity and development effort.
- The design should reduce the cost of resolving errors in the system post-deployment.
- The design should be scalable.
- The design should optimize functionality in terms of the product requirements.

3 System Behavior

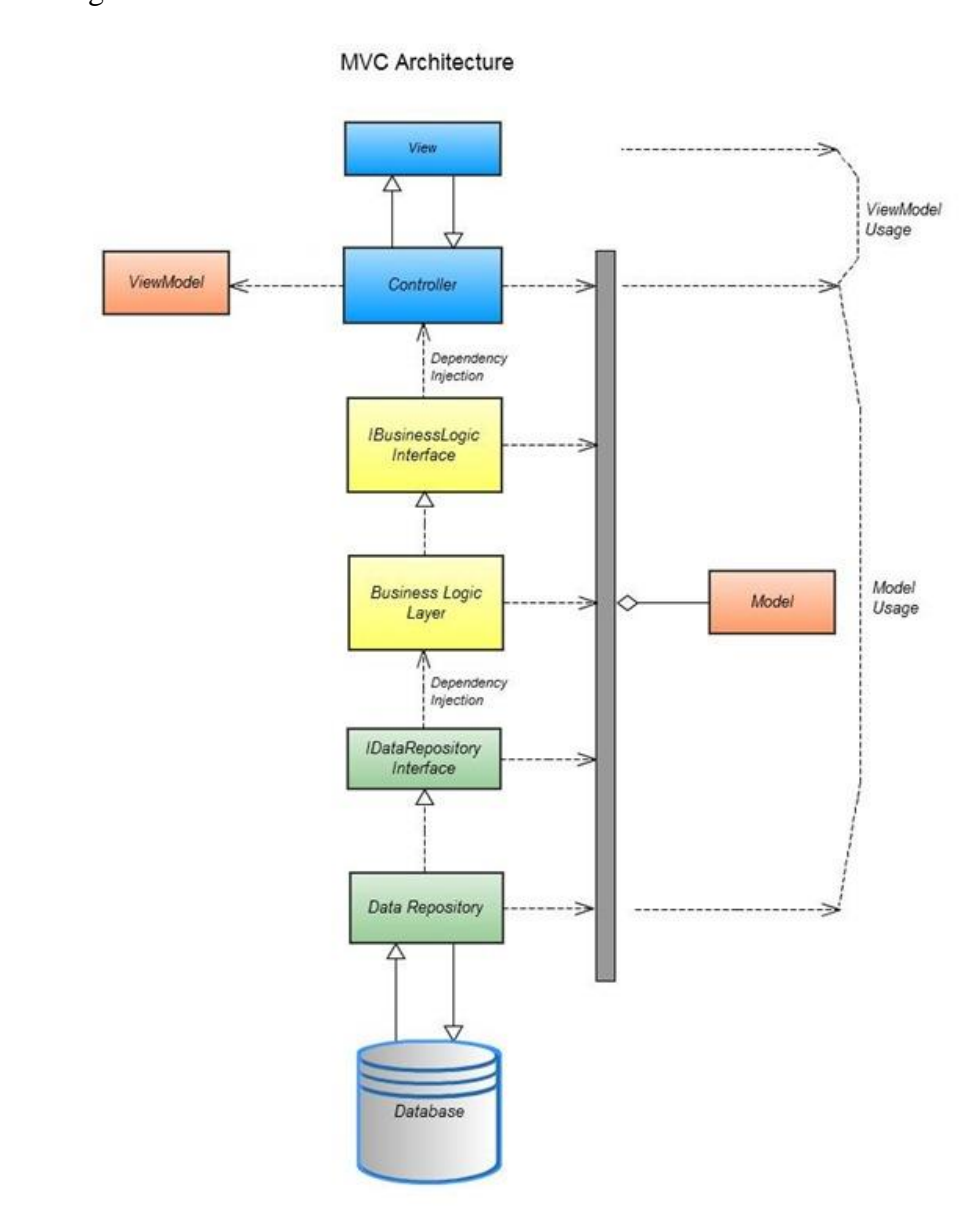
The Idea Engine application will be available on an intranet application server. Users access through their browser using http requests. This stateless design allows for scalability.

The architecture description presented here starts with a review of expected system behavior in order to set the stage for the architecture description that follows. For a more detailed account of software requirements, see the requirements document.

4 Logical View

4.1 High-Level Design (Architecture)

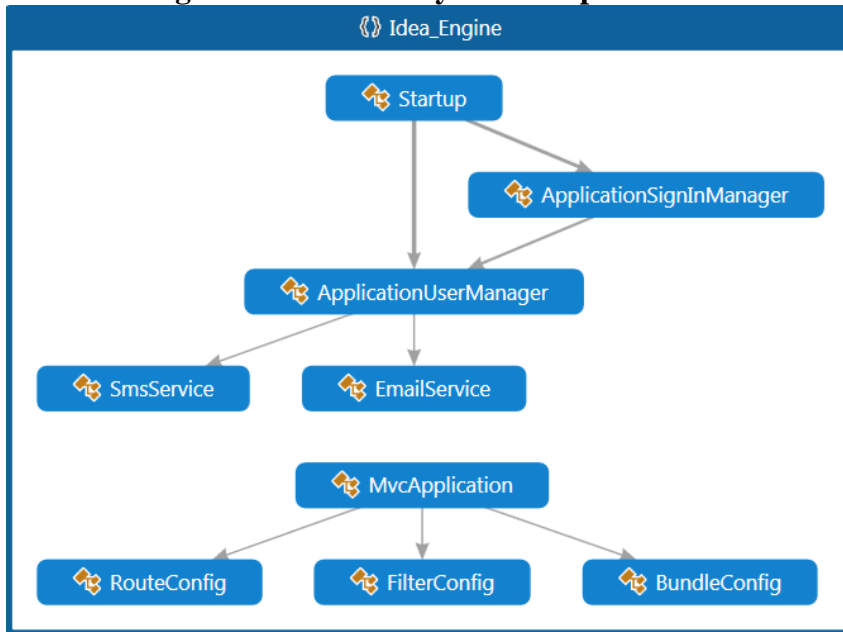
The high-level view or architecture of ASP.NET MVC



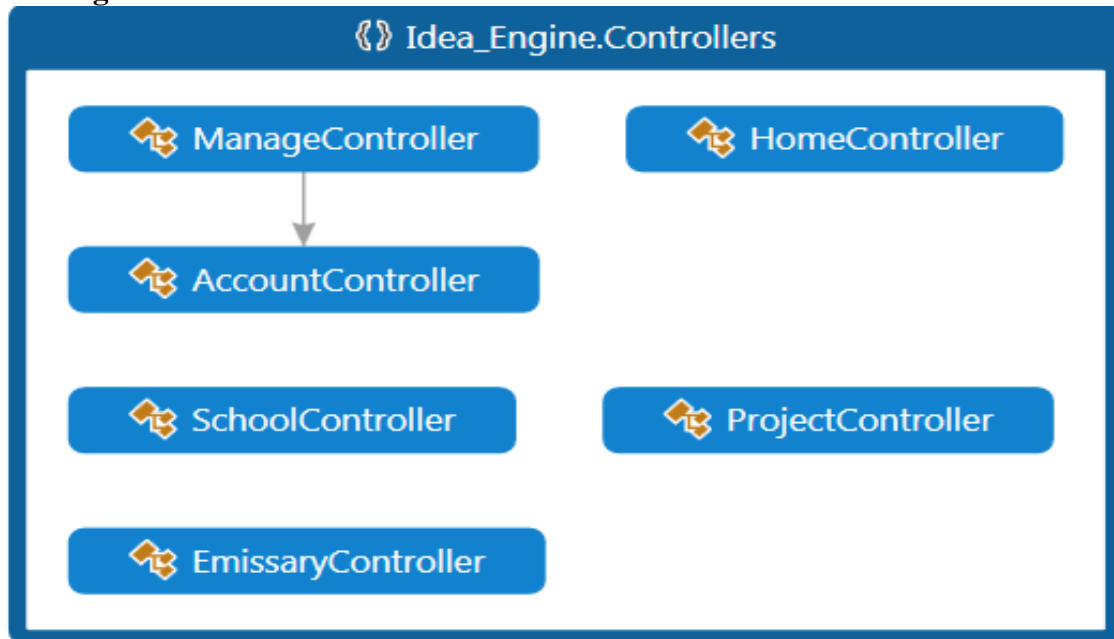
- The **View** is the specific UI the end-user is provided per permissions level.
- The **Database** is a central repository for all information about a project
- The **Controller** determines the view provided to the user

4.2 Mid-Level Design

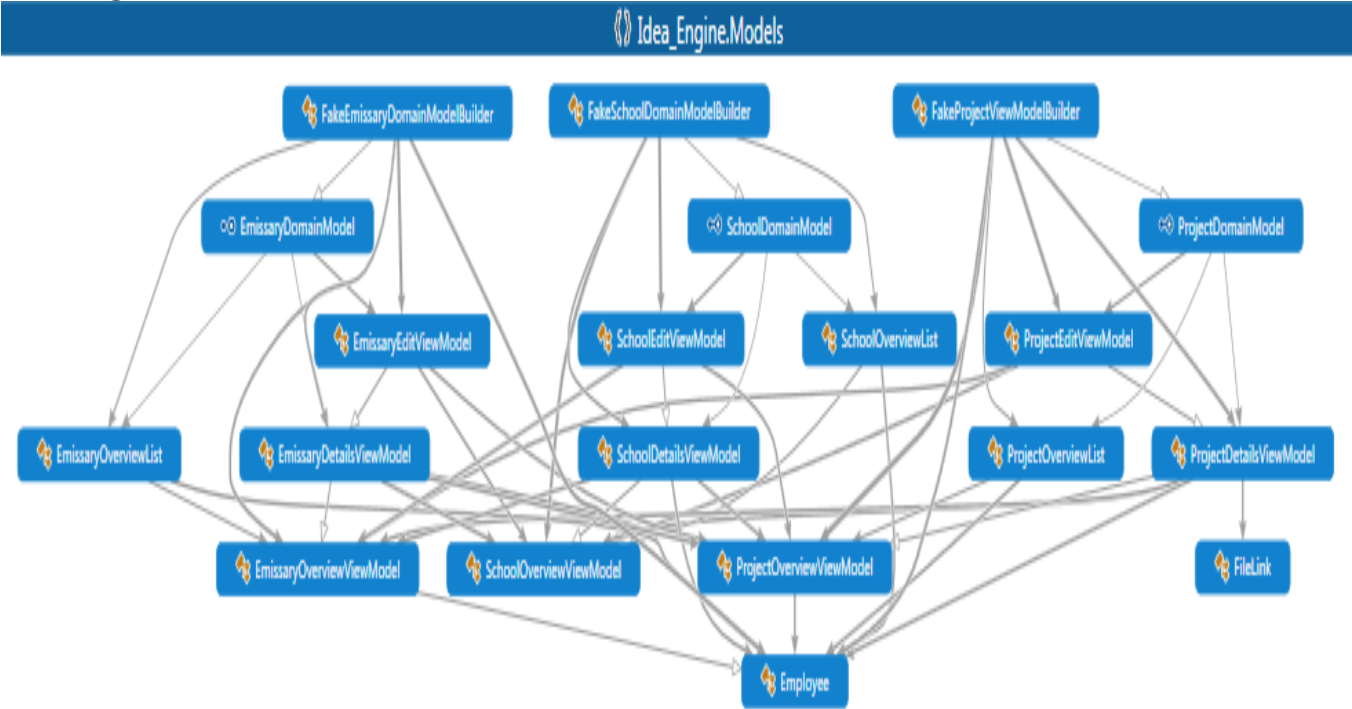
The Idea Engine has static subsystem components.



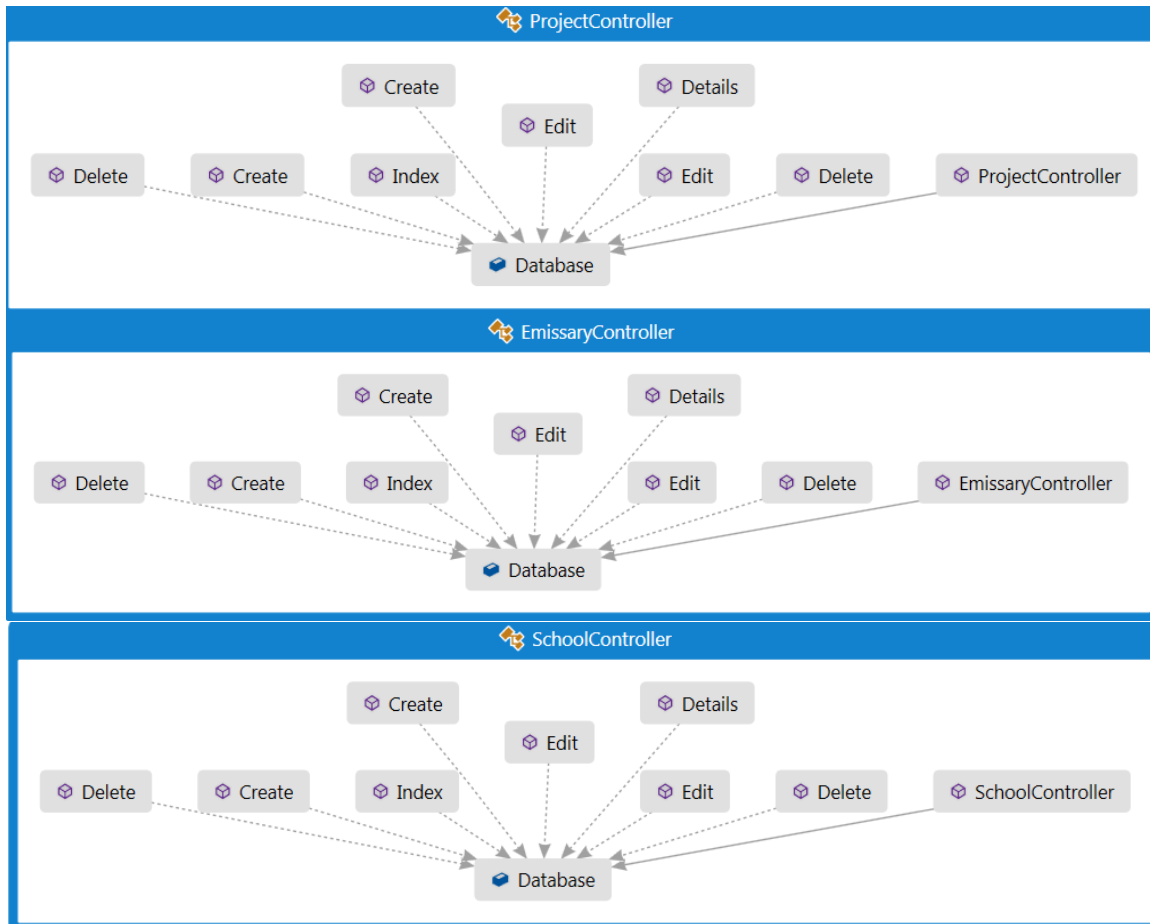
Idea Engine Controllers



Idea Engine Models



Idea Engine Sub Controllers and Classes



5 Use Case View

<Sketch architecturally significant use cases.>

- Contributor
- Emissary
- Admin