AppGene Design

# Introduction

The document is intended to describe the design of the product.

# Concepts

## Database Design Concepts

### Master Table

Definition: A table is a master table if the table has following features:

* Has a primary key, and the primary key has only one column.
* The primary key column values cannot be updated after created.
* The primary key column does not reference other table.
* The table may include columns which reference other tables.

Example: Department table

### Slave Table

Definition: A table is a slave table if the table has following features:

* Has a primary key, and the primary key has only one column.
* The primary key also references another table.

Example: Employee

### Business Table

### Custom Table

Definition: A table is a custom table if the table has following features:

* The table's definition will be changed by users.

Example: In a HR system, users want to define some tables to store employee personal information.

Built-in Data

# Database View

* Single Table (id, string, integer, double)
* single table (money/enum/Boolean/date/time)
* Single Tree table
* Single table with foreign keys

# Modules Design

* Entry

The application entry.

* Core

Define interfaces and controller for components

* Components

# Core

* SolutionContext
* IFeatureTemplate
  + Commands
* IFeature
* ILaunch : IFeature
* INavigation : IFeature

# Technical Decision

## Libraries

* Avoid use 3rd party libraries other than provided by Microsoft
* WPF
* Prism Enterprise
* Entity Framework

## Design Patterns

* MVVM

# Modules

## Entry

The components provide interactive functions used by end users. The components would be plug-ins in a development environment (e.g. Eclipse or Visual Studio), a rich client application, and web application or a console commands.

### Eclipse RCP Adapter

* Provide entry for AppGene
* Create Solution

Collect solution information, e.g. Company, License, Version, Root Namespace, etc.

* Edit Resources
* Edit Architecture
* Edit Non-function Features
* Edit Features

### WPF Application

## Commands

### Template

Manage Templates

TemplateCommands

### Solution

SolutionContext

SolutionTemplateCommands

SolutionSourceCommands

SolutionCommands

ComponentCommands

FeatureCommands

CommonFeatureCommands

## Templates

### Solution Templates

### Architecture Templates

### Common Feature Templates

#### Authorization\Authentication

#### Entry

#### Navigation

#### Accessibility

#### Exception

#### Logging/Audit

#### Instrument

#### Globalization

#### Localization

#### Report

#### Print

#### Export

#### Import

#### License

#### Help

#### About

#### Splash Screen

#### Version update

#### Transaction

#### Cache

##### Local Cache

##### Server cache

#### Deployment

#### UI Theme/Style

### Feature Templates

#### Master Table

#### Tree Table