Generating University Course Catalogs via a PHP Based Module

Chileleko Chileya, Siegwart Mayr, Dr. Harvey Alférez

cchileleko@southern.edu, mayr@southern.edu, harveya@southern.edu

SOUTHERN ADVENTIST UNIVERSITY — Power for Mind & Soul

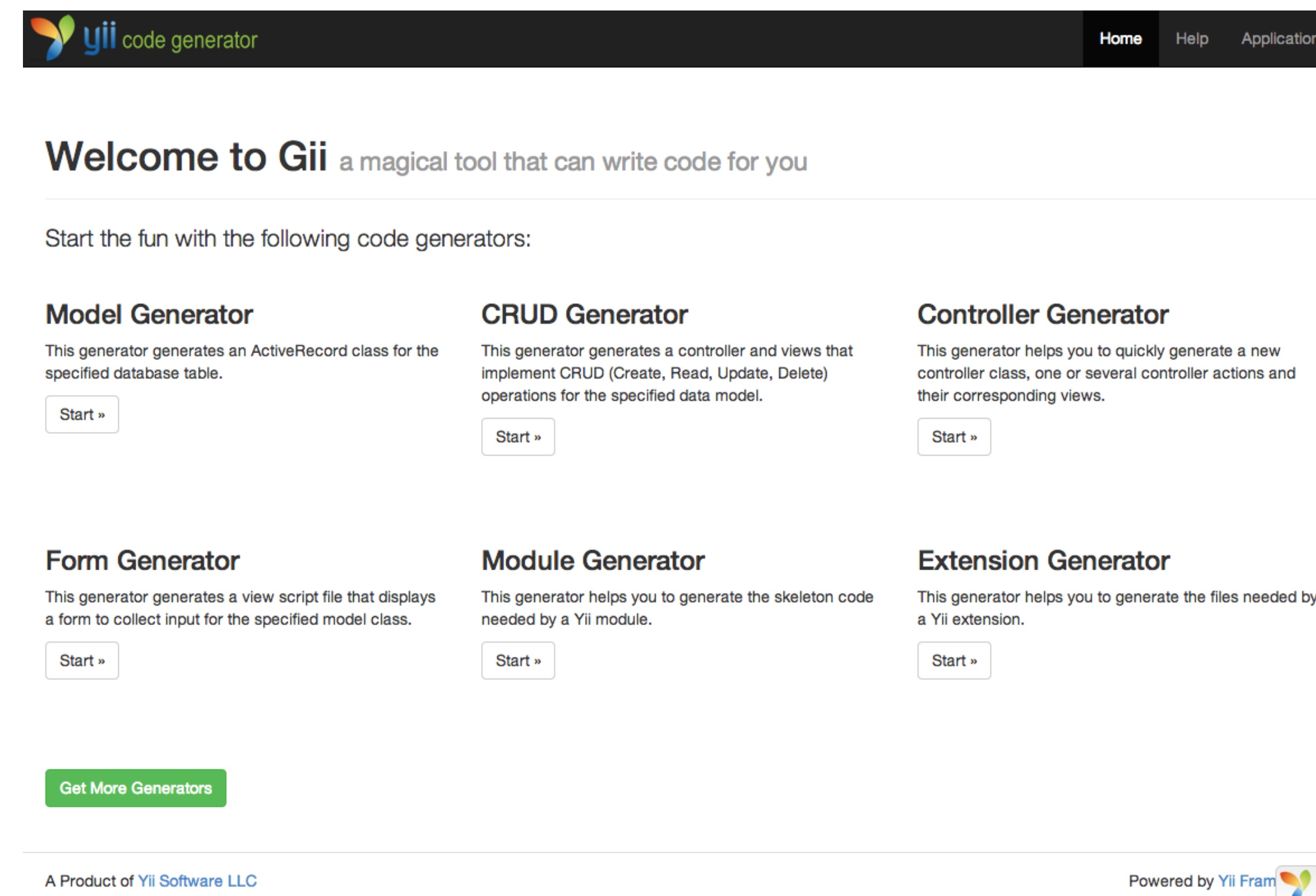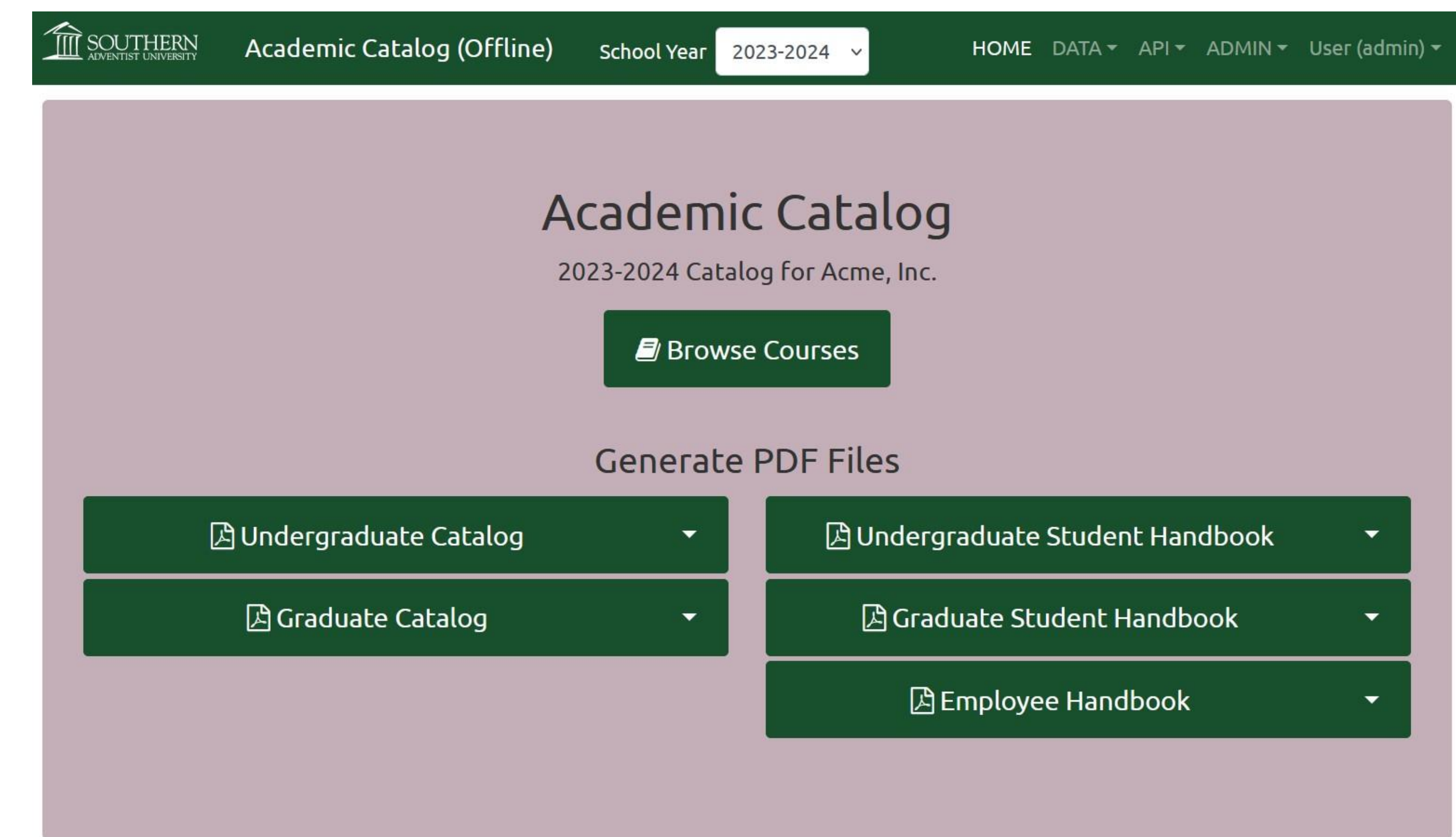SOUTHERN ADVENTIST UNIVERSITY — Center for Innovation and Research in Computing

Abstract

Catalogs are a requirement at any university. The current academic system at Southern Adventist University entails creating catalogs for the school by hand. The current model is very outdated and time consuming especially considering the database of all related school records available. The solution is a module using the PHP based framework called Yii to construct a module that will be integrated into the Southern Adventist University website that will automatically generate formatted catalogs through the frontend of the website. The previous module uses Kuali to store academic data as well as provide an API for third-party applications but was slow as well as having the drawback of a closed backend.
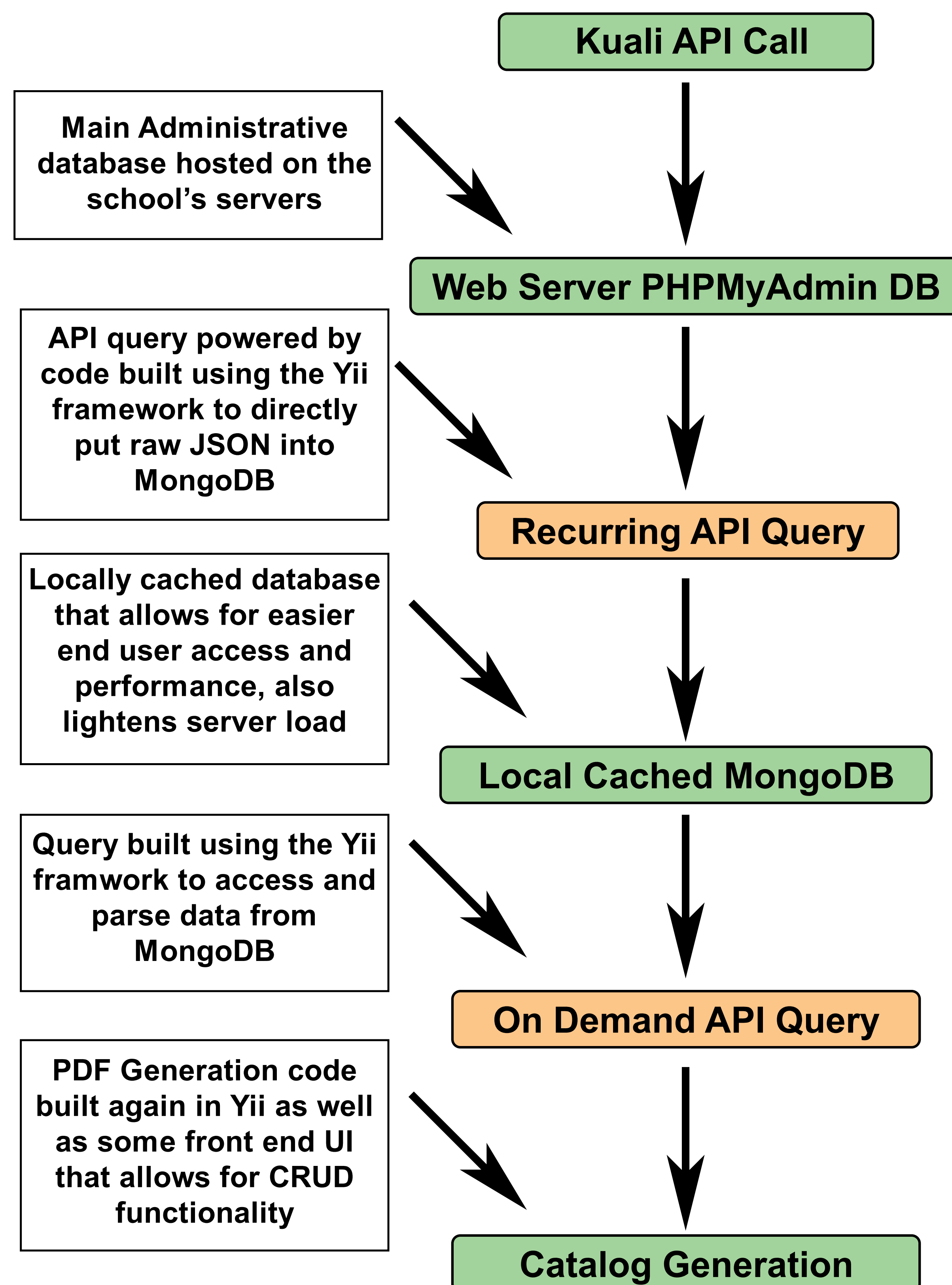
Gii Code Generation Packaged With Yii Framework

User Interface For Catalog Generation

Project Sequence

- **Kuali API Call**
  - Main Administrative database hosted on the school's servers
- **Web Server PHPMyAdmin DB**
  - API query powered by code built using the Yii framework to directly put raw JSON into MongoDB
- **Recurring API Query**
  - Locally cached database that allows for easier end user access and performance, also lightens server load
- **Local Cached MongoDB**
  - Query built using the Yii framwork to access and parse data from MongoDB
- **On Demand API Query**
  - PDF Generation code built again in Yii as well as some front end UI that allows for CRUD functionality
- **Catalog Generation**

Other Tools Used

1 GitLab
Gitlab hosts the project repo and facilitates the GIT process

2 Sourcetree
Sourcetree is a tool used for Git server functionality

3 XAMPP
XAMPP is an all-in-one package that contains Apache, MySQL, PHPMyAdmin to aid in local PHP development and local database creation

4 Visual Studio Code
Visual Studio Code alongside several other PHP specific formating extensions were used

5 Insomnia
Insomnia for developing and testing RESTFUL APIs

Generated 2023-2024 Catalog PDF