Deliverable D01: WIS architecture report

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Group E8.02

Github Repository: https://github.com/acme-recipes/Acme-Recipes

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Executive summary

This document contains an explanation about the notions that the group has about the architecture of a Web Information System. We have acquired these notions during our years of study coursing the degree of Software Engineering of the University of Seville.

Revision table

Revision number	Date	Description
v1	04/07/2022	Initial version
v1.1	05/07/2022	First revision and added content
v2.0	05/07/2022	Final version

Introduction

During our years studying Software Engineering, we have gained some knowledge related to the area of Software Architecture. We now have learned the basis of building a system with a concrete architecture pattern (layers pattern), including also how to develop and build a system of these characteristics and how the architecture of a real information system works with all its advantages and disadvantages.

Contents

A Web Information System (WIS) is an application that manages data and information and performs different types of operations with the data that it contains. This application is accessed from a Web Browser like Firefox or Chrome and users can deal with it by interacting with a user interface.

Traditionally, a WIS is divided into three different layers following the MVC pattern (Model View Controller), and each one of them works in a different task. Usually, these three layers are the ones detailed in the following points:

-**Presentation layer**: this layer stores all the information of the different views of the system. The users of the system interact with this layer in order to perform all the actions that the system offers to the user.

-Logic layer: this layer contains all the logic of the application. The operations that the system must perform to offer the data that the user demands.

-Resources layer: this is the layer that stores and interacts with the data of the system. It provides the logic layer with the necessary data to perform all the demanded operations.

The WIS are also traditionally using a Model-View-Controller pattern. In the case of a three-layer architecture, the presentation layer contains the view, and in the logic layer we find the model and the controller.

Even though this is probably the universal architecture pattern of a WIS, it is not the only one. There are many other architectures, such as the micro services based architecture. In this architecture, the system is divided into different service modules, and each one of them performs a different task of the system. These services are connected to each other to conform the whole WIS.

As well as we find a huge number of options in the architecture of a WIS, there is also a big number of patterns that developers can use in certain cases in order to create a concrete system.

Conclusions

Despite the fact that we have already learned some notions about software architecture, we are still very far from being experts in this area of knowledge. We hope that in this subject of *Design and Testing II* to become more comfortable with developing a mid-scaled Web Information Systems and we advance towards our final goal of learning not only the basics. And we also hope to acquire more notions about the impact that an architecture pattern can have on a WIS in terms of efficiency and performance.

Bibliography

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