

MENTOR MANAGEMENT WEB APP

ARCHITECTURE DESCRIPTION

Chapter 1

Introduction

The purpose of the requirements specification document is to gather together all the different aspects of the proposed Mentor Management System to give detailed in-sight into the requirements of the system. The document provides both a high-level overview of product features as well as defining the proposed system in depth.

Overview

The proposed system's aim is to help university find suitable mentors who are either professionals in Gauteng or students. The system will operate as the Mentor Management System's (MMS) digital replacement for current manual and unreliable system of operation.

There are two primary users of the system - the mentor and the mentee. There is one secondary user - the administrator of the mentor management system.

There are many benefits to the system the primary of which is that users do not have to physically locate and go to the administrator's office to get or to be a mentor and that the administrator doesn't have to manually match mentors to mentees.

Some of the secondary benefits that can be realized is the ability for mentors to keep track of the Mentors that register as well as coordinate the success programs. To allow for mentees and mentors to edit their details and be matched with preferred mentors and mentees.

The risks that need to be taken into consideration are in level of High to Low. Some of the serious ones is information security and data loss. We also need to take a serious look at component damage over time and the influx of users at any time. This means the system needs to be able to handle multiple users at any given time without latency.

Successful and effective risk management is the basis of successful and effective IT security. Due to the reality of limited resources and nearly unlimited threats, a reasonable decision has been made concerning the allocation of resources to protect systems that will be introduced.

Glossary

Mentor – an experienced and trusted adviser

Mentee – a person who is advised by a mentor

Pair – A mentor and his/her mentee

MMS - Mentor Management System; Proposed system.

Mentor Management Scope

This system is web application that will be able to register a mentor, requiring their demographic data, contact information, professional history to date, qualities of a preferred mentee and etc. System will also register a mentee requiring their demographic data, contact information, tertiary education details, brief description of themselves, preferred mentor and etc. This system will then match mentee with 1 or more mentors that more or less fits his/her criteria ordered by likelihood of preference. The mentee will then be able to “request” a mentor thereafter the mentor can then view the mentees profile which includes his/her contact details and can then choose to contact them with a response on whether or not they are willing to mentor the mentee. A mentor can choose to be inactive, not be visible in mentee’s “search results”, after they have found one or more mentees or at any given time. After a mentor registers to the system, an administrator will contact them and somehow verify the data given by the mentor before they are officially in the system. When a mentor chooses to mentor a student, they both have to set their status to paired and the student will be able to rate the mentor. This rating is viewed by the mentees when viewing a profile. A mentor can be a working individual and/or a student doing their 2nd year or up and the mentee is restricted to any university student.

This app is for university students and professional individuals. The functionalities will differ depending on who the user is, which is determined during registration. The system is facilitated by an administrator, who has access to all data stored in the system, verifies mentees and handles/records system reviews.

This system does not yet provide a platform for users to communicate.

Chapter 2

Stakeholders and concerns

2.1 Stakeholders and Concerns

End User

These are Mentor, Mentee and Administrator. Mentee wants to search and find a mentor.

Front End Developer

Programmer who focuses on writing code for the display to the user.

Back End Developer

Programmer who creates the logical **back-end** and core computational logic of a website.

Business Analyst

Analyzes an organization or **business** domain (real or hypothetical) and documents its **business** or processes or systems, assessing the **business** model or its integration with technology.

Systems Analyst

Analyzes a complex process or operation in order to improve its efficiency, especially by applying a computer system.

Software Testers

A software tester is involved in the quality assurance stage of software development and deployment. They conduct automated and manual tests to ensure the software created by developers is fit for purpose. Software testing involves the analysis of software, and systems, to avert risk and prevent software issues.

Database Administrators

A **database administrator (DBA)** is responsible for the performance, integrity and security of a **database**. They will also be involved in the planning and development of the **database**, as well as troubleshooting any issues on behalf of the users.

Developer Manager

The Applications Development Managers works with the CIO and senior management to determine systems development strategy and standards.

User Experience Specialist

They design and execute usability studies and other **user** research, utilizing their broad knowledge of **user experience** and methodological expertise. As the project evolves, the UX **Specialist** will conduct **user** testing and other **user**-facing activities to validate the design, interaction and content.

Use Cases

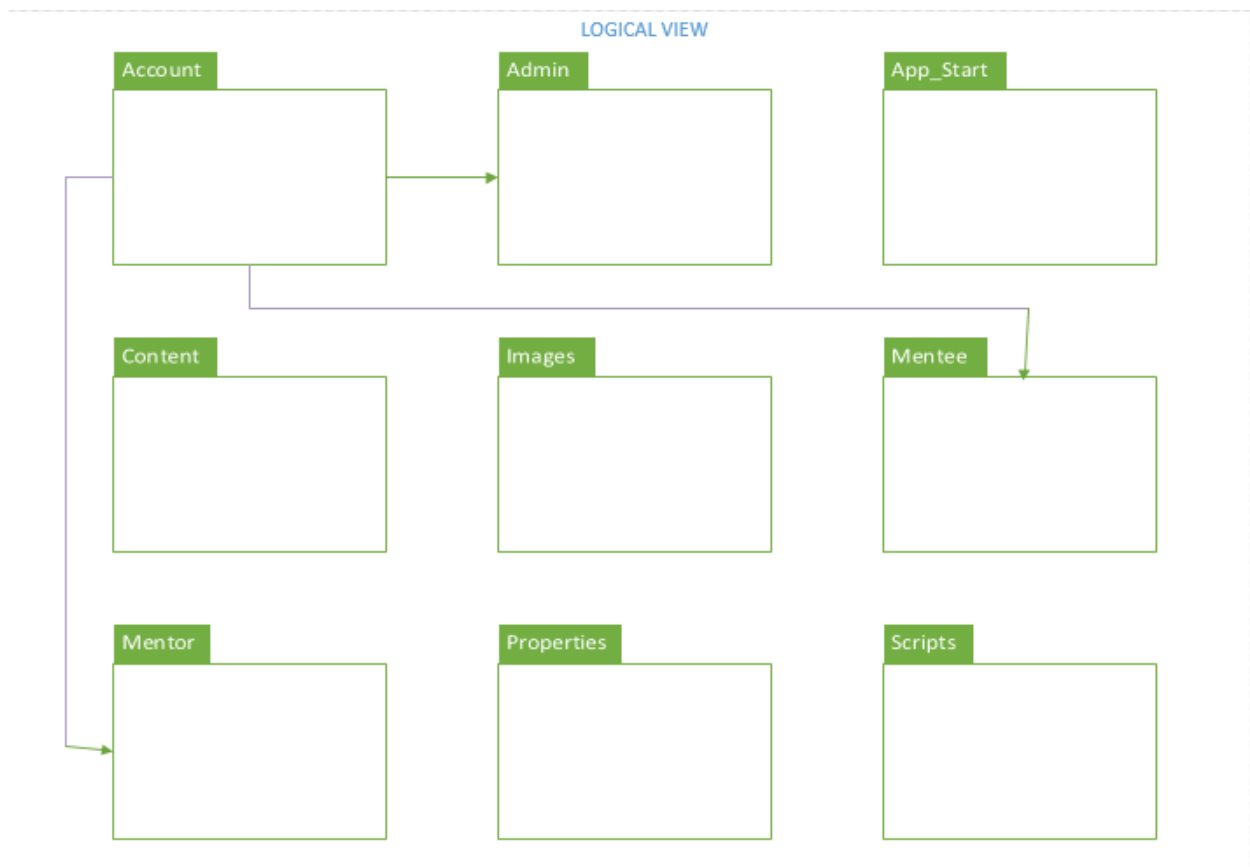
USER	FUNCTIONAL REQUIREMENTS	Use Case
General	System must allow user to register and specify the type of user (Mentor/Mentee).	Register User
	System must allow user to login using a username and password	Login User
	System must allow user to deactivate their account	Archive User
	System must allow user to update their profile.	Update Profile
Mentee	System must allow mentee to fill out a form detailing preferred mentor.	Create Preferences List
	System must allow mentee to update their mentor preferences.	Update Preferences List
	System must allow mentee to search for a mentee; provide filtered suggestion based on preferences.	Search Mentor
	System must allow mentee to view a mentor's profile (including rating).	View Mentor Profile
	System must allow mentee to request a mentor's mentorship.	Request Mentor
	System must allow mentee rate a mentor; provided the two are paired therefore if mentor has accepted the request.	Rate Mentor
	*System must allow mentee to mentor's contact details; provided mentor has accepted the request.	*View Mentor Contact Details
Mentor	System must allow mentor to receive request for mentorship.	View Request
	System must allow mentor to view a mentee's profile	View Mentee Profile
	System must allow mentor to accept a request; pairing the two.	Accept Request
Administrator	System must allow admin to verify new mentors.	Update Mentor Verification
	System must allow admin to view mentor ratings.	View Mentor Rating
	System must allow admin to deactivate a mentor's or mentee's account.	Archive User

Chapter 3

Viewpoints+

1. Logical view

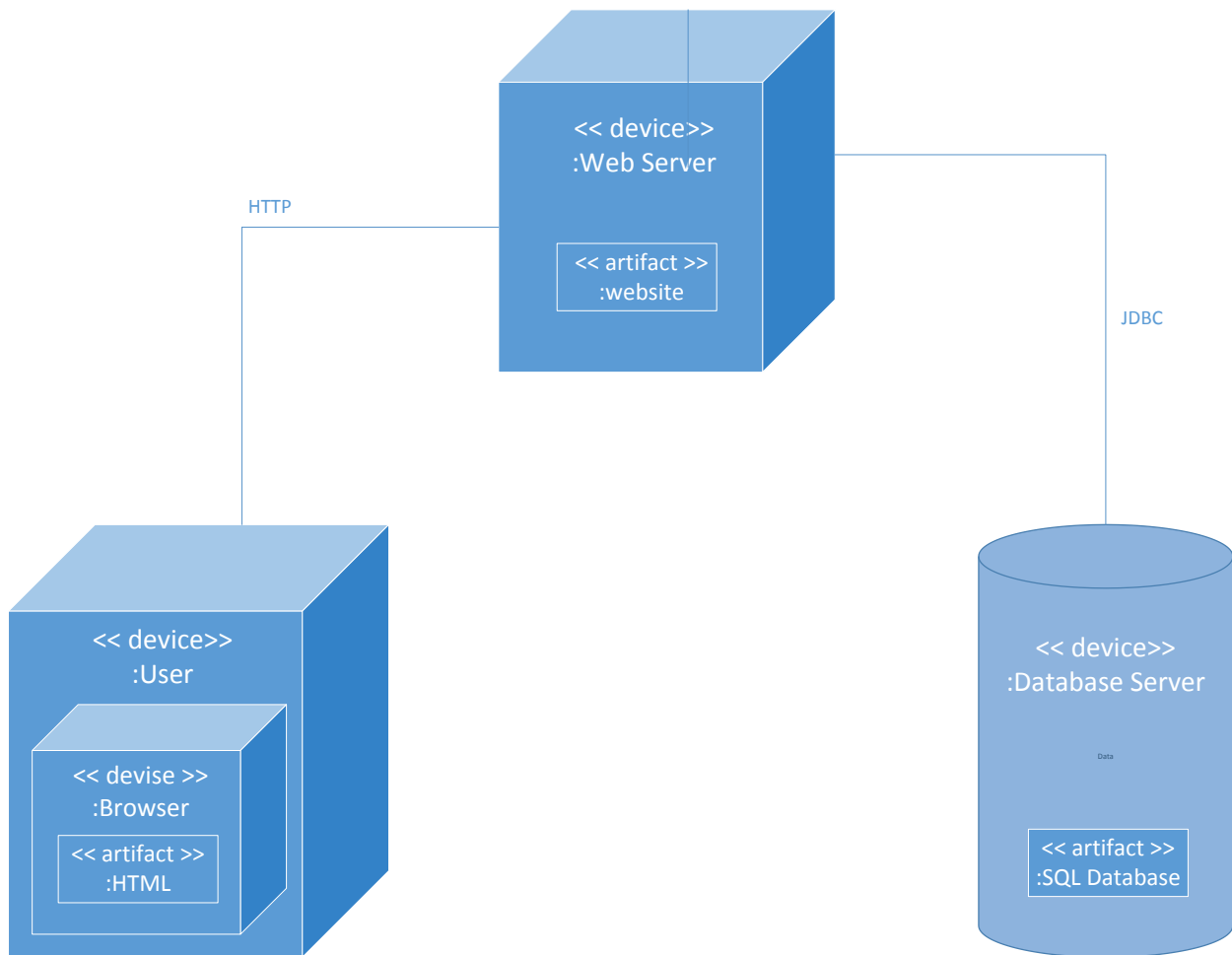
This view shows the structure the system in a logical and hierarchical manner including all the components.



2. Physical View

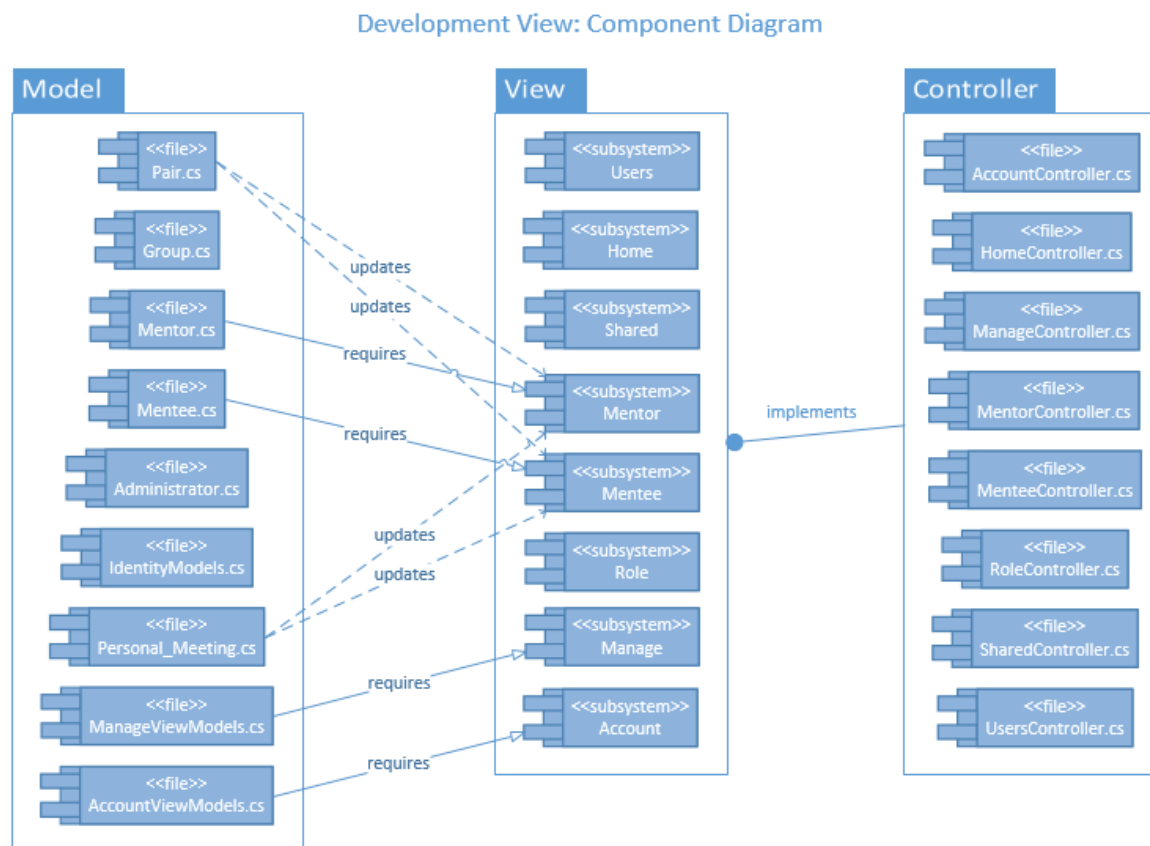
The system representation at the physical level, the deployment diagram is used to show how hardware component are connected.

PHYSICAL VIEW: DEPLOYMENT DIAGRAM



3. Development View

A view that shows how the components are related and the services they provide to each other including update and implementation.

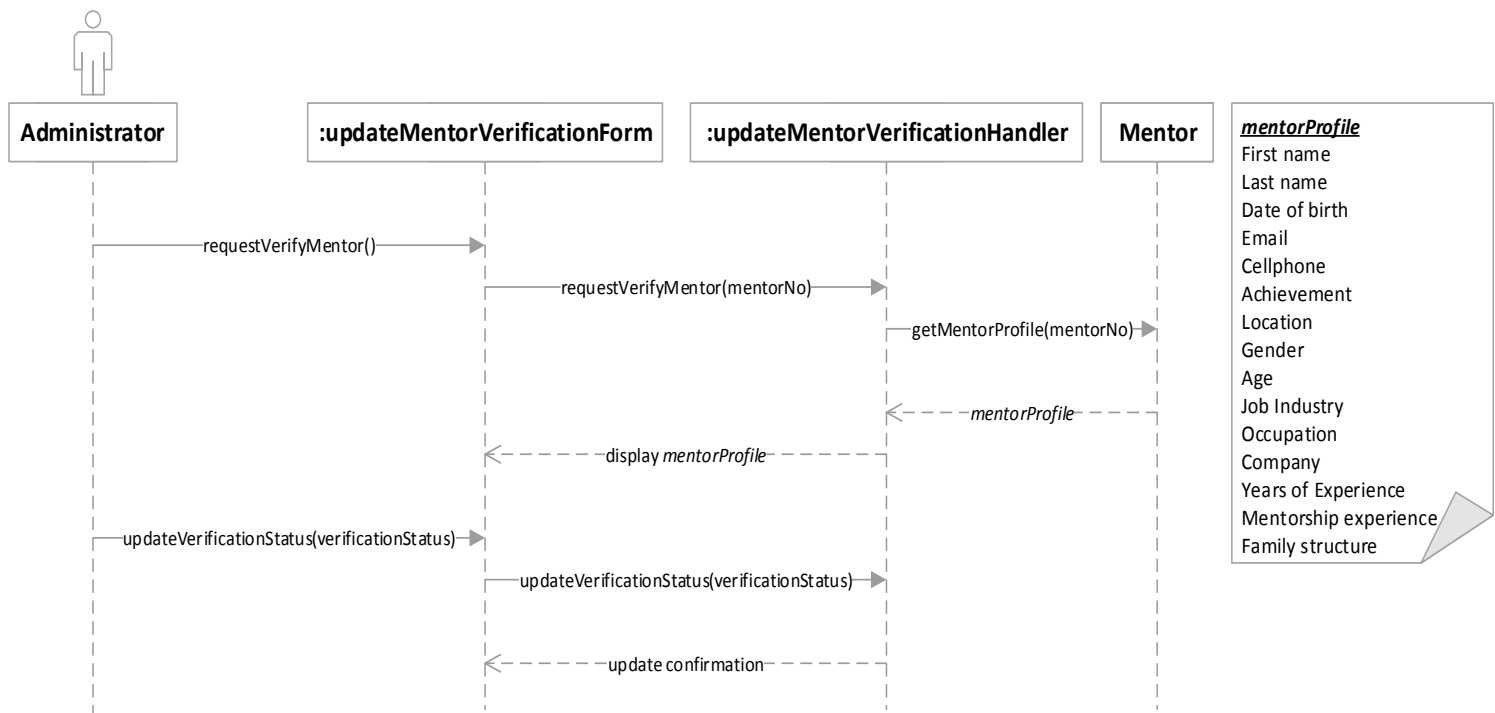


4. Process View

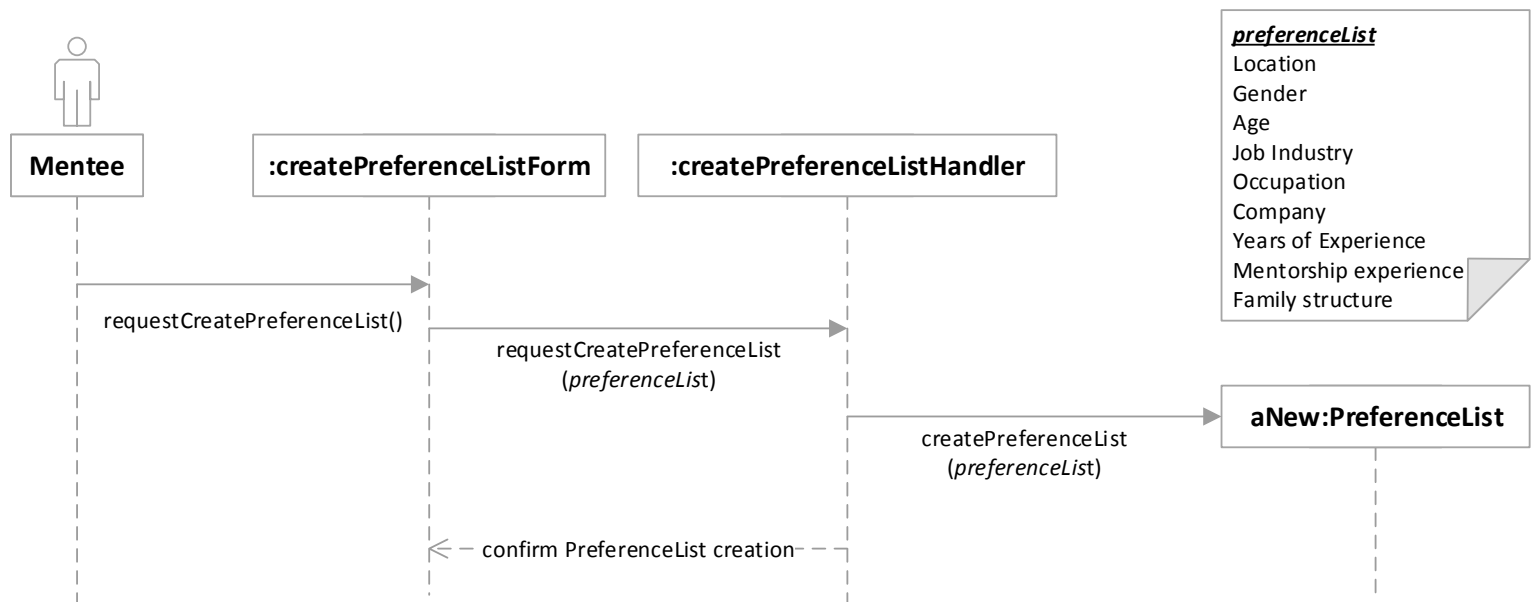
Main Functions Sequence Diagrams

Update Mentor Verification

If a mentor has registered onto the system, they do not appear on mentee's search list at all unless it has been verified somehow by the administrator that they are who they say they are on the system. A post condition for this use case is that the verified Boolean attribute for the mentor entity will be set to true, if the mentor is indeed credible.



Create a Preference List: A precondition for creating a preference list is that the mentee must be registered on the system thus in the Mentee data store. And a post condition is that their preference list must be stored in the Preference List data store thereafter.



Sequence Diagram: Create Preference List

Search Mentor: A mentee's search list consists of a list of mentors whose profile matches the preferences of that mentee by at least 4 characteristics. This list is ordered by the number of preferences matched with the highest number on top. A precondition for all listed mentors is that they have to be verified.

