Application

KAF Agency Portal

Module

Security & User Management

Business Process

Notification & Alert

Reporting

Administration

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# SYSTEM SPECIFICATION

## 1.0 Introduction

KAF Agency Portal System aims to provide a secure online agency platform for agents and investors to gain access to the investment asset details online. This portal system mainly allows the KIF agents and investors to view and download the latest Unit Trust Funds statements in a secure portal.

Agency Portal will provide the global platform for KAF agents and both local and international investors, where the agents will have access to their corresponding list of clients and its details and the investors will have access to their statements of funds.

### 1.1 Goal and Objective

The main goal for this project is to develop a secure online agency portal that has specific features to display account holding details, user profile, interactive dashboard, interactive and informative data charts and fund statements.

### 1.2 System Statement of Scope

KAF Agency System is a web-based application that is designed and developed by KAF IT department as a product for internal (Back Office users) and external (Agents & Investors) clients.

It is used by both agents and investors to view Unit Trust Funds details and download the latest statements. The application allows social media-based login for user authentication.

### 1.3 System Context

In order to make the smooth transition to an entire KAF Agency System, one needs to see some strategic issues:

* What is the structure in the system and how can it handle the organization task?
* What are the user roles and organization in leveraging and supporting this KAF Agency System?

### 1.4 Major Constraints

A social media login, also known as a social sign-in, is a kind of single sign-on where you use existing login information of a social networking account like, Google, LinkedIn and Facebook to log on to a third website, instead of creating a new log-in account specially for that website.

Social media login is mainly designed for simplifying the login process for users and to realize a higher conversion rate for registrations. Of course, it is easier when the user does not have to create a new login account, meaning to think of a new username and password, and to remember it! However, there is a few constraints need to be considered of using social media login as system authentication.

* Lack of trust with Users

People often do not fully trust the company or website to use their personal data in a correct manner. They do not want a company to post useless information on their social media profile and are worried that they will be likely spammed.

* Excluding Users who are not active on social media site

There are people that do not use social media for all different kind of reason. Because of this, we may exclude a big part of our target audience.

* Social media logins may contain false information (data accuracy)

People do not want always use accurate information when they create their social media account, or they do not use the exact email account with which they signed up anymore. It depends on the privacy settings of the person whether if they gain access to their information or not.

* Social networking login sites are sometimes blocked

The use of social media login through platform like Facebook can unintentionally cause access issue at certain work places due to restricted access to social media sites for productivity reasons.

* Loss of control to a third party

If Facebook, LinkedIn or other networks do not work, user does not have access to their account. It is also possible that the user cancels or deactivates their social media account, if this account was used to login to system, hence the account also would possibly be activated.

* Security issues

If one of these social media login providers is hacked, all accounts they use to log in are affected too.

* Too many options

User will have difficulty to choose which social media login to use if there are too many login providers.

* Lack of email address for the client service

Not every social media provider gives access to email address.

* User might forget which social media login they currently use

Unless they always use the same social media account for all social logins, user often forget which social login they have used with this application, just like they often forget which username and password are used. 

## 2.0 Functional and Data Description

### 2.1 System Architecture

System architecture is shown as below.

Figure : System architecture

System Interfaces

Security & User Management Module

Security & User Management

Data Access Layer

Other Operations

Common Operation Manager

Data Layer

Business Services

Notification & Alert Module

Notification & Alert

Messaging gateway

Templates Manager

Data Access Layer

Reporting Module

Reporting

Data Access Layer

Business Logic Module

Assessments & Services

Data Access Layer

Other Operations

Administration Module

Administration

Data Access Layer

Other Operations

Data Source

Database

XML

Data Access Components

Data Helpers / Utilities

UI Components

UI Process Components

KAF Agency is designed using N-tier architecture. *N-tier* data applications are data applications that are separated into multiple *tiers*. Also called "distributed applications" and "multi-tier applications," n-tier applications separate processing into discrete tiers that are distributed between the client and the server.



Figure : N-tier Application Architecture

### 2.2 System Components (Technology Requirements)

#### 2.2.1 Presentation Layer

The top-most level of the application is the *presentation tier* (User Interface) which users interact with an application. The main function of the interface is to translate tasks and results to something so that the user can understand.

This web application is built using .NET technology, which is ASP.NET framework 4.x.x, and Bootstrap as the presentation layer.

Bootstrap is currently the most popular front-end web framework for developing responsive web applications. It offers a number of features and benefits that can improve your user experience with your web site, whether you are a novice at front-end design and development or an expert. Bootstrap is deployed as a set of CSS and JavaScript files, and it is used to help the design of website or application scale efficiently from phones to tablets to desktops in responsive manner. Current version of framework would be v4.0.

#### 2.2.2 Business Logic Layer

This layer coordinates the application, processes commands, makes logical decisions and evaluations, and performs calculations. It also moves and processes data between the two surrounding layers. This layer contains all application business logics.

#### 2.2.3 Data Access Layer

This layer is to stored and retrieved information from database or file system. The information is then passed back to the logic tier for processing, and then eventually back to the users. KAF Agency System is built using MS SQL 2016 and XML files as data storage.

The database structure design would be many-to-one and one-to-many. For instance, the user (Agent) is able to login with multiple social account IDs, and those IDs can only match with single Agent’s ID in the Back Office system. The Agent’s ID can have a list of clients that are corresponding to the specific agent.

## 3.0 Software Requirements

### 3.1 Server

* Internet Information Services (IIS)
* .NET Framework 4.0
* ASP.NET Web Forms
* Microsoft SQL Server 2016

### 3.2 Client

* Web browser

### 3.3 Design and Implementation Constraints

* **Reliability requirement**

The main reliability is the validation used. Without proper validation, the system does not allow to enter that value into database. All the required validation are kept controls are kept the keep the system secure.

### 3.4 Assumptions and Dependencies

* End user is the person with enough knowledge to use system.
* User can only register once with selected social media login.

## 4.0 System Workflow Design

Following is an example of workflow of KAF Agency Portal System for User Registration.

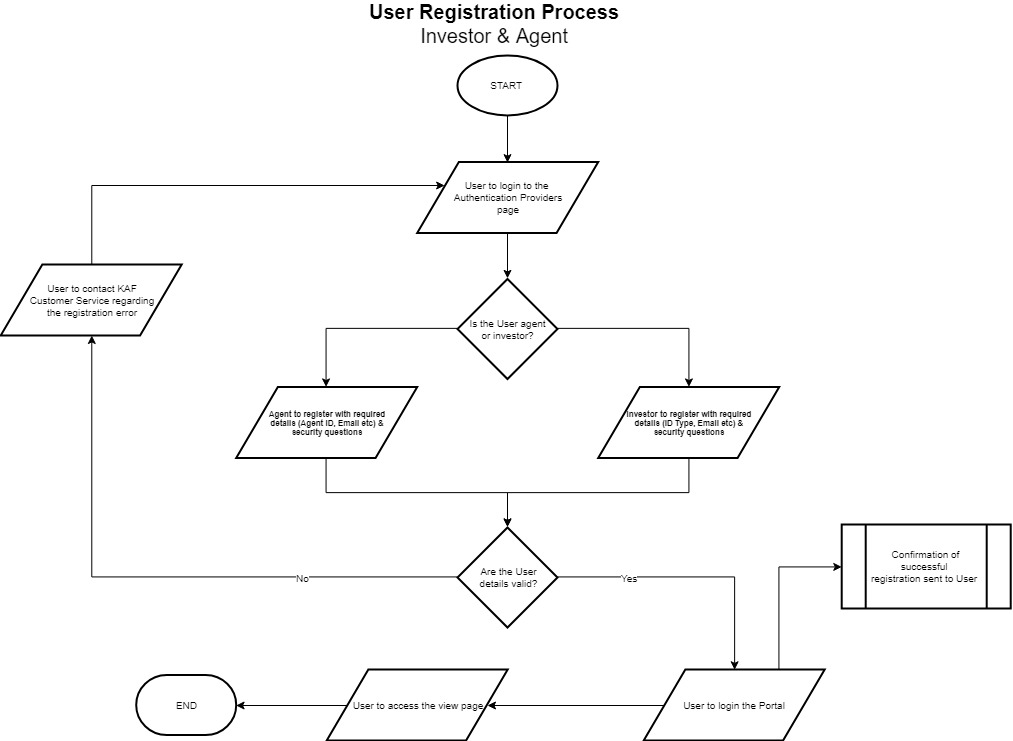


Figure : User Registration Process

## 5.0 Feature Requirements

At this stage, according to information collected from the users, the features are required in the Agency System are as follows;

### 5.1 Page Access and Visibility

#### 5.1.1 Interactive Dashboard View

The dashboard will contain the following objects:

* Overview of the total holdings
* It displays information such as Market Value, Investment Portfolio and Unit Trust details.
* The information will be displayed in a form of pie chart that comprises EPF Investment and Cash.
* If user clicks the EPF Investment section, it will show an EPF composition such as EPF 1, EPF 2, EPF 3 etc.
* If user clicks the Cash section, it will show a Cash section such as Cash 1, Cash 2, Cash 3 etc.
* Data table
* It shows a summary of currency (RM), EPF and Cash data.

#### 5.1.2 Agent

* Personal information.
* Investor details.
* Investor listings.
* Investment details.
* Transaction details.

#### 5.1.2 Investor

* Personal information.
* Agent details.
* Investment details.
* Transaction details.

### 5.2 Statement View

#### 5.2.1 Agent

* User will be able to see the statements by month for the last 24-months.
* User will only be able to view their own investors.
* It allows a date range selection for user to pick selected dates.
* User will be able to see the summary of the statements.
* User will be able to view, download, and print the latest statements.

#### 5.2.2 Investor

* User will have the option to view the statement for quarterly or monthly release for the last 24 months.
* User will be able to see the summary of the statements.
* User will be able to view, download, and print the latest statements.

### 5.3 Admin View and Features

* The system allows user for enabling or disabling agent login and with modal functionality for remarks.
* The system allows user for enabling or disabling investor login and with modal functionality for remarks.
* There will be import file functionality for data source – Agent, Investor, CIF, and Ledger.
* Log report to record and trace all system activities done by users.
* The system allows user to disable system for system maintenance schedule.
* Optional: manual data entry and data amendment.
* Update the opening balance (year & month).

### 5.4 Support and Feedback Page

#### 5.4.1 Agent and Investor

* Name
* Position
* Subject
* Description
* Details/Comments

## 6.0 Acknowledgement and Acceptance

|  |
| --- |
| **Requester:** |
| Signature |
| Name : |
| Date : |

|  |
| --- |
| **Developer:** |
| Signature |
| Name : |
| Date : |
|  |
| **Manager Application Development:** |
| Signature |
| Name : |
| Date : |
|  |
| **Approved By:** |
| Signature |
| **Head of Group IT** |
| Name : Abdul Saheed |
| Date : |