Hamdard University
Department of Computing
Final Year Project

Influencer Connect
(FYP-019/FL24)

Software Requirements Specifications

Submitted by
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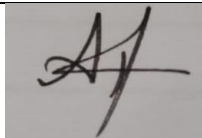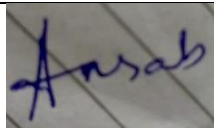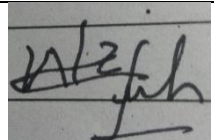Ansab Haider (2225-2021)
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Document Sign off Sheet

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Definition of Terms, Acronyms, and Abbreviations

Term	Description
CRUD	Create, Read, Update, and Delete – Basic operations for database management.
UI	User Interface – The graphical layout of an application for user interaction.
UX	User Experience – The overall experience and satisfaction a user gets from using the platform.
SQL	Structured Query Language – A standard programming language for managing and querying databases.
HTTPS	Hypertext Transfer Protocol Secure – A protocol for secure communication over the internet.
SignalR	A library for adding real-time web functionality to applications.
WebSocket	A protocol for real-time, two-way communication between clients and servers over the web.
Entity Framework	An object-relational mapper (ORM) for .NET applications to interact with databases.
Encryption	The process of converting data into a secure format to prevent unauthorized access.
Stakeholders	Individuals or groups affected by or having an interest in the project, such as influencers or agents.

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1. Introduction

Purpose of Document

The purpose of this document is to define the requirements and functionality of the Influencer Connect platform, purpose of which to close the gap between influencers, stakeholders and marketing agents. The document serves as a guide for developers and evaluators to ensure that everyone involved in the project can work together effectively and stays on the same page throughout the process.

1.1 Intended Audience

This document is intended for:

- Supervisors and evaluators to understand the project's goals and scope.

- Developers for implementation of the platform as per the requirements.

- Future maintainers for reference during updates or enhancements.

2. Overall System Description

2.1 Project Background

Influencer Connect addresses the growing need for streamlined communication between influencers and marketing agents. In an era where digital marketing dominates, influencers often miss critical opportunities due to cluttered inboxes and spam filters. This platform ensures effective communication and simplifies collaboration for product promotion.

2.2 Problem Statement

Influencers connect solves the problem of missed opportunities of influencers by making communication between influencers and marketing agents organized. In today's digital marketing world, many important messages get lost or overlooked in busy inboxes or spam folders. This platform ensures that this doesn't happen so no chance is missed.

2.3 Project Scope

This project involves creating a platform where influencers and agents can:

- Manage direct contacts.
- Post or respond to public promotional requests.
- Use a chat system for discussions. The platform will focus on usability, reliability, and solving communication inefficiencies.

2.4 Not In Scope

The platform will not:

- Handle financial transactions or payment processing.
- Provide content creation tools for promotions.
- Support influencer performance analytics in the initial version.

2.5 Project Objectives

- Develop a user-friendly platform for both, influencers and marketing agents.
- Reduce chances of missed promotional opportunities.
- Enable seamless communication via chat.
- Provide tools for public and private promotional requests.

2.6 Stakeholders & Affected Groups

- **Primary Stakeholders**: Influencers and marketing agents.
- **Affected Groups**: Brands relying on influencers, product manufacturers, and social media managers.

2.7 Operating Environment

The platform will operate on:

- Web-based systems (accessible through major browsers).
- The platform will operate on major web browsers, including Chrome, Firefox, Safari, and Edge.

2.8 System Constraints
- Internet connectivity is required to use this platform.
- Limited storage for chat history and media files in the initial version.

2.9 Assumptions & Dependencies
- Users should have basic digital skills to navigate and use the platform effectively.
- The chat and notification system will rely on trusted and secure third-party libraries or services.
- The platform's availability depends on the secure and reliable hosting services.

3. External Interface Requirements

3.1 Hardware Interfaces

The platform can be accessed through normal web browsers which required no special hardware. It can be interacted through basic input devices (keyboard and mouse) on desktop systems and touchscreens on mobile devices. The system is hosted on a server and can handle requests from client devices over the internet.

3.2 Software Interfaces

1. User Interface (UI)

- **Description:** A web-based user interface for marketing agents and influencers to interact with the system.
- **Technologies:** HTML, CSS, JavaScript
- **Features:**

  - Login/Sign-Up forms for user authentication.
  - Dashboards tailored for marketing agents and influencers.
  - Forms for campaign creation and management.
  - Search filters for finding influencers.
  - Notification and alert pop-ups.

2. Database Interface

- **Description:** Interaction between the application and the database for CRUD (Create, Read, Update, Delete) operations.
- **Technologies:** SQL Server with Entity Framework Core.
- **Features:**

  i. Tables for users, campaigns, influencer data, and notifications.
  ii. Relational models ensuring data consistency.

3. Notification System Interface

- **Description:** A system to send notifications to users regarding campaign updates, invitations, and deadlines.
- **Technologies:**

  i. Backend: Integration with SignalR for real-time notifications.
  ii. Frontend: JavaScript/JQuery hooks for displaying live updates.

3.3 Communications Interfaces

The platform uses a secure HTTPS protocols, ensuring data integrity and security during communication over internet. It works with any standard internet connection, whether it's through a Wi-Fi network (LAN) or mobile data. Communication between users (e.g., chats) is facilitated through WebSocket protocols which makes the conversation going smoothly without any delays.

4. System Functions / Functional Requirements

4.1 System Functions

Ref #	Functions	Category	Attribute	Detail and Boundary Constraints
R1.1	Allow influencers to manage agent contact requests.	Evident	Usability	Influencers can approve or block agent contact requests easily.
R1.2	Enables agents to post public promotion requests	Evident	System Response Time	Requests should appear in the platform within 5 seconds of submission.
R1.3	Enable real-time chat between agents and influencers.	Hidden	Concurrent User Load	Chat should support at least 50 users chatting at the same time.
R1.4	Notify users of updates (messages, requests)	Evident	Notification Speed	Notifications should be delivered to users within 5 seconds after an event occurs.
R1.5	Secure user data during all operations.	Hidden	Data Security	All sensitive data must be encrypted using industry-standard protocols.
R1.6	Allow users to create accounts and log in securely.	Evident	Security and Reliability	User must login securely with a response time of 5 seconds.

System Attributes/ Nonfunctional Requirements

Attribute	Details and Boundary Constraints	Category
Response Time	System should response to user actions (e.g., login, post creation) within 5 seconds.	Mandatory
Concurrent User Load	Support up to 100 active users simultaneously without effecting performance of the platform.	Mandatory
Interface Metaphor	The platform should have a simple, user-friendly design that works well on both desktop and mobile browsers.	Optional
Data Security	All user data must be encrypted while being sent and stored, ensuring privacy and safety.	Mandatory
System Availability	The platform must ensure 99.9% uptime, excluding scheduled maintenance.	Mandatory

4.2 Use Cases

4.2.1 List of Actors

- **Influencer**: A person who shares content and manages requests from marketing agents. They can communicate with agents but cannot post promotional requests.
- **Marketing Agent**: A person or company looking to promote products through influencers. They can post public requests for promotions and directly contact influencers.
- **System (Website)**: The platform itself, acting as a bridge between influencers and marketing agents, facilitating communication and collaboration.
- **Administrator**: The person who oversees the backend of the platform, ensuring its proper functioning, user management, and overall system maintenance.

4.2.2 List of Use Cases

Influencer Manages Agent Contact Requests

- Influencers can approve or block marketing agents who request to collaborate with them.

Agent Posts Public Promotion Request

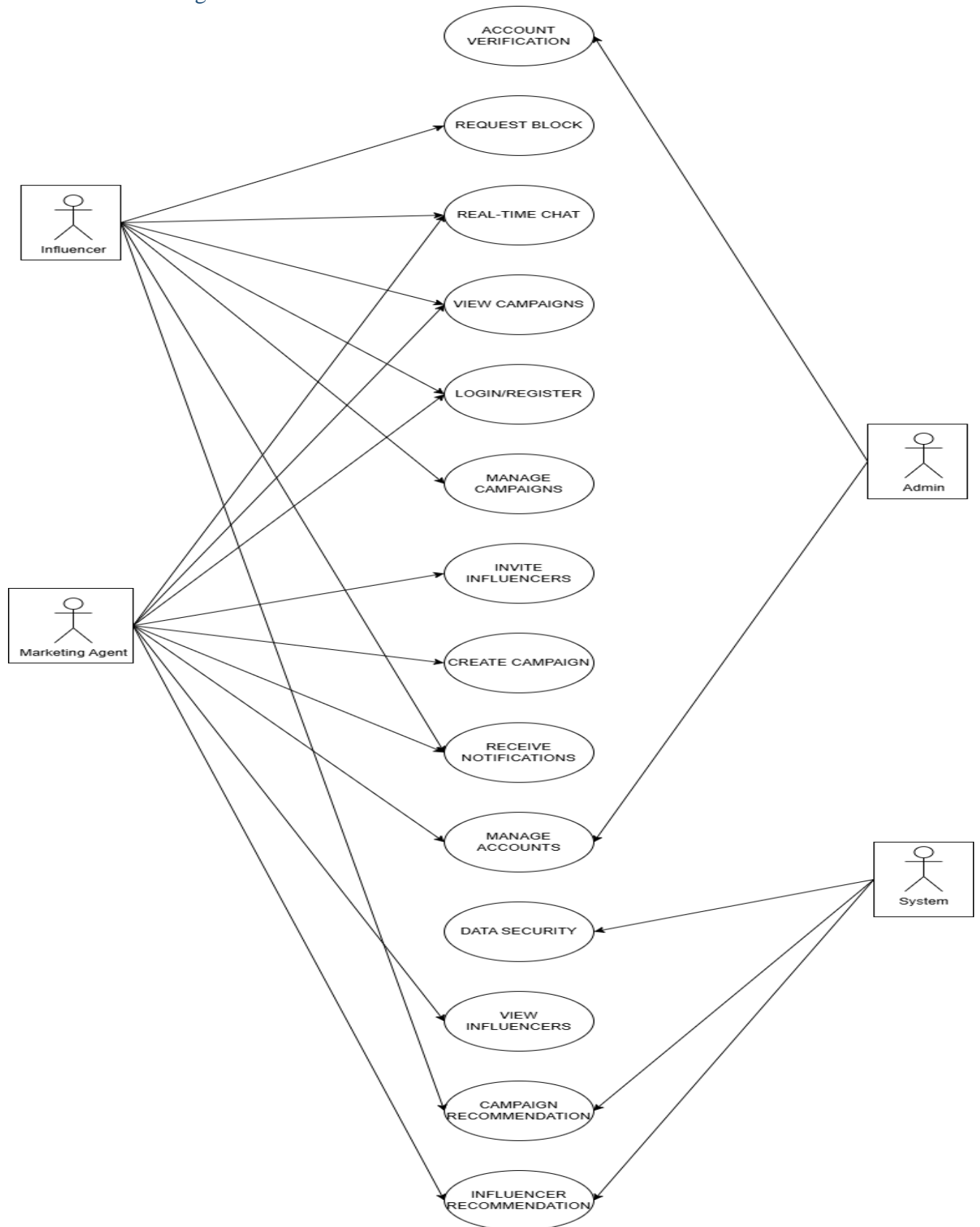- Marketing agents can publicly post requests for promotion, which influencers can respond to.

Influencer and Agent Chat

- Influencers and agents can communicate in real-time to discuss promotion details and negotiate terms.

System Sends Notifications

- The system sends notifications to users (influencers and agents) when there are updates like new messages or requests.

4.2.3 Use Case Diagram

Section: Manage Agent Contact Requests

- **Name**: Manage Agent Contact Requests
- **Actors**: Influencer
- **Purpose**: Allow influencers to approve or block agent contact requests.
- **Description**: Influencers review agent requests and choose to approve or block them.
- **Cross References**: Functions: R1.1
  Use Case: This use case allows the influencer to manage agent collaboration requests within the platform.
- **Pre-Conditions**: Influencer is logged in and has pending agent requests.
- **Successful Post-Conditions**: The request is either approved or blocked, and the system updates the status accordingly.
- **Failure Post-Conditions**: The agent request remains unprocessed, and the system may show an error.

Typical Course of Events:

Actor Action	System Response
1. Influencers views the agent request.	2. System displays agent details and request info.
3. Influencers approves or blocks request.	4. System updates the request updates and notifies the agent.

Alternative Course:

- Step 3: If the influencer does not approve or block within 5 minutes, the system sends a reminder.

Section: Post Public Promotion Request

- **Name**: Post Public Promotion Request
- **Actors**: Marketing Agent
- **Purpose**: Allow agents to post requests for promotion.
- **Description**: Marketing agents create public posts requesting influencer collaboration for product promotion.
- **Cross References**: Functions: R1.2
  Use Case: This use case enables marketing agents to post public promotion requests for influencers to see and respond.
- **Pre-Conditions**: Agent is logged in and has the promotion details ready.
- **Successful Post-Conditions**: The promotion request is live and visible to influencers.
- **Failure Post-Conditions**: No request is posted, and the system shows an error.

Typical Course of Events:

Actor Action	System Response
1. Marketing agent fills in request form	2. System validates the form and prepares for posting.
3. Agent submits the request	4. System posts the request, making it visible to influencers.

Alternative Course:

- Step 1: If the form is incomplete or invalid, the system shows an error message.

Section: Chat Between Influencer and Agent

- **Name**: Chat Between Influencer and Agent
- **Actors**: Influencer, Marketing Agent
- **Purpose**: Allow influencer and agent to communicate via chat.
- **Description**: Influencers and agents can chat in real-time to discuss promotional terms.
- **Cross References**: Functions: R1.3
  Use Case: This use case allows influencers and agents to engage in real-time chat for collaboration discussions.
- **Pre-Conditions**: Both influencer and agent are logged in.
- **Successful Post-Conditions**: A chat conversation is saved, and both users are notified of new messages.
- **Failure Post-Conditions**: No messages are exchanged, and the chat session is not saved.

Typical Course of Events:

Actor Action	System Response
1. Influencer opens chat with agent	2. System loads the chat window and message history.
3. Influencer sends a message	4. System updates the chat and notifies the agent.

Alternative Course:

- Step 3: If the agent is offline, system sends a notification when they return.

5. Non - Functional Requirements

5.1 Performance Requirements
- **Response Time**: The platform should load or respond to any user action, like logging in or sending messages, within 5 seconds to provide a smooth user experience.
- **Throughput**: The system must handle at least 100 users at the same time without having any performance issues.
- **Scalability**: As the platform grows, it should support up to more users at once, without any noticeable performance issues.

5.2 Safety Requirements

- **Data Protection**: Ensure that all user data, such as personal details and chat messages, are securely stored and transmitted using encryption methods, preventing unauthorized access or breaches.
- **System Integrity**: The platform must be designed to handle potential vulnerabilities, preventing data corruption or unauthorized changes to user accounts or system settings.
- **Secure Hosting**: The platform should be hosted on reliable, secure servers that provide protection against physical and digital threats, ensuring continuous availability and data safety.

5.3 Security Requirements

- **User Authentication**: The platform must have a secure login process to ensure that only authorized users (influencers, agents, administrators) can access their accounts and perform actions on the platform.
- **Data Encryption**: All sensitive data, including personal information and messages, should be securely encrypted during transfer and storage to protect against unauthorized access.
- **Role-Based Access Control**: Access to specific features (such as posting requests or viewing sensitive information) should be restricted based on the user's role to prevent unauthorized actions.

5.4 Reliability Requirements
- **Uptime**: The platform should be available and working properly 99.9% of the time, excluding scheduled maintenance.
- **Error Handling**: The system must handle errors smoothly, displaying appropriate error messages to users without causing system crashes or loss of data.
- **System Recovery**: In case of a system failure, the platform should be able to recover from backup as soon as possible to minimize downtime.

5.5 Usability Requirements
- **User-Friendly Interface**: The platform must have a simple, user-friendly interface that enables users to navigate the platform easily and access important features with ease.

- **Mobile Compatibility**: The platform must be fully responsive, ensuring that users can access all features from mobile devices with the same ease as on a desktop.

5.6 Supportability Requirements

- **Bug Tracking**: The platform should have a system to track and fix issues that arise, so developers can fix them quickly.
- **Documentation**: Internal documents should be available to help system admins and developers with troubleshooting and maintaining the platform.
- **System Monitoring**: Automated tools should notify the admins about any problems, like slow performance or potential security issues.

5.7 User Documentation

- **User Manual**: A detailed manual should be available to help Influencers and Agents learn how to use the platform and its features.
- **FAQs**: A section that answers common questions about the platform, such as how to manage agent requests or check notifications.

6. References

1. https://www.researchgate.net/publication/373760614_Influencer_Marketing_with_Social_Platforms_Increasing_Brand_Awareness_and_User_Engagement

2. https://www.researchgate.net/publication/352120476_Understanding_influencer_marketing_The_role_of_congruence_between_influencers_products_and_consumers

3. https://sproutsocial.com/insights/influencer-marketing-platforms/

4. https://pmc.ncbi.nlm.nih.gov/articles/PMC8872418/