First two questions link: https://github.com/ayesha0958/WebAssignment1/tree/main

**Question 3**

**20L-0958**

**System Design**

The User Interface of both websites is modern, easy to navigate and simple. Whereas, the user interface of investify has more dynamic features and up to date design. Both the designs are responsive, work well with smaller devices and screen sizes.

**Comparison**

Investify follows the design of a single-page whereas KASB follows multipage approach.

* **Investify:**

Investify provides a more continuous and fluid experience for the user. With just one page, visitors enjoy a linear navigation flow and access parts of page. It provides faster load time since only the necessary content is from the server when needed. They also lessen the server load as they don't require the server to generate complete HTML for each page view.

Despite the increased speed it can have a slower initial speed because it has to load all the components all at once. From development point of view it is more complex and faces SEO challenges due to a heavy reliance on JavaScript for rendering, search engine crawlers may encounter challenges when attempting to index the content. It then also faces the challenge of scalability.

* **Kasb:**

Firstly it’s a multi-page design provides limitless **scalability**. You can create as many pages as necessary and expand the navigation system accordingly. Building such a website or application is easier and less complex and it is SEO friendly.

Frequently, it leads to reduced user interaction speed since moving between pages necessitates complete page reloading. This frequent reloading of pages can give users the impression of sluggishness.

**Security:**

After using Buitwith on both websites, which is a tool to discover technologies and frameworks that a website used I discovered that:

**Invesity and Kasb** both use LetsEncrypt which a non-profit certificate authority that provides free SSL/TLS (Secure Sockets Layer/Transport Layer Security) certificates to website owners. Thus it has a security measure to ensure a secure communication between a user's web browser and the web server, ensuring that data transmitted between the two is encrypted and secure.

**API**

Both application integrate a mix of both network and application. Network APIs used for the low level communication between software components. Network APIs handle low-level data transmission and infrastructure, while application APIs offer higher-level functionality and enable integration of external services and tasks within an application.

For example a network API like Alpha Vantage API is used to fetch real-time and historical market data for analysis and investment research. They both also use Google Fonts API which is considered a network API.

An application API used by both is Google Maps API. It enables developers to incorporate a range of mapping and geolocation functionalities offered by Google within their applications.