### **Project Scope: Venue Database Searching**

#### ***Main Features and Functionalities to be Developed***

1. **User Login and Access Management**:
   1. Users can create accounts and log in to the system.
   2. The system will provide different user roles, such as administrator and regular users, with specific access rights.
2. **Venue Search and Filtering Functionality**:
   1. Users will be able to search for venues based on various criteria, such as location, date, price, and venue capacity.
   2. The search results will be filtered according to the user's query and sorted by relevance.
3. **Data Scraping and Automated Updates**:
   1. An automated data scraping tool will be implemented to extract venue data from different websites and update the database regularly.
   2. The data scraper will capture key information such as venue name, address, capacity, availability dates, and pricing.
4. **Database Management**:
   1. A venue database will be established to store venue-related information (e.g., name, address, capacity, facilities, price, availability).
   2. The project will use **PostgreSQL** as the database management system for handling data storage and queries.
5. **User Interface (UI)**:
   1. A user-friendly interface will be developed for users to search and filter venues.
   2. The UI will be built with **HTML, CSS, and JavaScript** using a front-end framework like **React** or **Vue.js** to enhance responsiveness and interactivity.
6. **Backend Development and API Design**:
   1. The backend will be developed using Python framework, handling interactions between the frontend and the database.
   2. A **RESTful API** will be provided to support data exchange between the frontend and the database.

#### ***Excluded Features***

1. **Advanced Recommendation System**:
   1. The project will not include a complex AI-based recommendation system; only basic filtering based on query criteria will be supported.
2. **Mobile Platform Support**:
   1. The project will focus solely on web development, and mobile support will not be included in the current development cycle.
3. **Internationalization (Multi-language Support)**:
   1. The system will only support English, and other language versions are not part of the development plan.

#### ***Project Constraints and Assumptions***

1. **Time Constraints**:
   1. The project will be completed within four sprints.
2. **Resource Limitations**:
   1. With a limited team, the initial focus will be on developing the search functionality and database management. Advanced UI design and data scraping may need to be completed in future iterations.
3. **Technical Requirements**:
   1. The database system must support efficient data querying and sorting.
   2. The data scraping tool should handle anti-scraping mechanisms to ensure stable data extraction.
4. **Dependencies**:
   1. The project depends on third-party data sources (venue provider websites) for gathering venue information. The availability of these sources may impact project progress.