**Integrated Student Project: Smart City Well-being Analysis and Intervention System**

**Due date: Nov 3rd, at 11:59PM**

**Project type:** Team of 3 students

The objective of this exercise is to strengthen your ability to analysis a problem and devise a system design to address the problem. There is no programming with no need for algorithmic details.

As a team of Information Systems students, you have been presented with a unique opportunity to address critical urban challenges. Your city faces interconnected issues in health, education, legal systems, and economic stability, particularly in disadvantaged neighborhoods. You are tasked with designing a Smart Device-Integrated Urban Well-being Analysis and Intervention System that will change how the city understands and improves community well-being.

**Objectives**

Design and prototype a system that will:

1. Utilize smartphones and IoT devices to collect real-time data on individuals' life events

2. Implement a life event scoring system (positive and negative)

3. Integrate personal data with the broader community-level information

4. Analyze the impact of individual events on family and overall community well-being

5. Identify patterns and potential root causes of urban issues

**The Challenge (Test Cases)**

City officials are debating several resource allocation approaches:

1. Constructing a new hospital

2. Implementing a comprehensive health education program

3. Investing in youth intervention programs

4. Expanding economic opportunity initiatives

The data collected from your system should help officials understand how these factors interrelate and which interventions might most effectively address root causes.

**Deliverables**

1. Comprehensive system design document following our reference architecture including:
   1. Detailed system architecture
   2. UI/UX wireframes
   3. Domain models and database schema
   4. Privacy and ethics considerations
2. Final presentation for city officials, department heads, and community leaders, including:
   1. Overview of system capabilities
   2. Demonstration of how the system addresses city challenges
   3. Discussion of potential impact and implementation strategy
3. Video recording of the presentation
   1. Each member of the team must present aspect of the project

**Evaluation Criteria**

- Digital and AI Innovation in addressing complex urban challenges

- Thoroughness of system design and architecture

- Quality of UI/UX design

- Sophistication of data analysis and predictive modeling approaches

- Consideration of ethical implications and privacy concerns

- Potential for real-world impact and scalability

- Clarity and persuasiveness of final presentation

**Summary**

This project represents the forefront of smart city technology and urban informatics. Your work has the potential to transform urban life quality assessment and improvement. As you specify this system, prioritize creating a solution that is technologically advanced, inclusive, ethical, and genuinely beneficial to all community members.

Remember, this project transcends programming—it's about designing digital solutions to break cycles of poverty, legal troubles, and health issues. Your technical skills will address one of society's most pressing challenges, potentially improving millions of lives.

Your innovation could set a new global standard for urban development and community well-being analysis.