

Project Scope Document

Project Title: HealthMatch

Overview

HealthMatch is a management-facing software application designed to help companies identify and select the most suitable healthcare providers for their employees. The system streamlines the process of evaluating healthcare options by combining employee needs, cost constraints, and provider data into a single intelligent matching platform. Through an intuitive interface and efficient backend design, HealthMatch enables businesses to make data-driven, equitable, and cost-effective healthcare decisions for their workforce.

Objectives

- Simplify the healthcare provider selection process for employers.
- Collect and analyze data on employee preferences, coverage needs, and cost limits.
- Provide ranked recommendations of healthcare providers that best fit organizational and employee criteria.
- Support long-term management by maintaining provider performance data and satisfaction metrics.
- Deliver a user-friendly interface accessible to HR teams and management.

Key Features

1. Employee Needs Collection:
 - a. Surveys or forms allow employees to input their healthcare preferences and requirements (family plans, mental health coverage, affordability).
2. Cost and Constraint Management:
 - a. Management inputs budget limits and company-specific restrictions for healthcare plans.
3. Provider Database Integration:
 - a. The system maintains a database of healthcare providers, including cost structures, benefits, and satisfaction ratings.
4. Matching Algorithm:
 - a. HealthMatch uses filtering and ranking logic to recommend providers that best satisfy both employee and management priorities.
5. Results Dashboard:
 - a. Displays matched providers, comparison summaries, and analytics for better decision-making.

Stakeholders

- Company Management / HR Teams: Primary users who make decisions based on HealthMatch results.
- Employees: Indirect users whose data and preferences drive the recommendations.
- Healthcare Providers: External entities represented in the provider database.
- Development Team: Responsible for designing, implementing, and maintaining the application.

Deliverables

- Project documentation including requirements, design diagrams, and test plans.
- A functioning prototype of the HealthMatch web application.
- Final evaluation report comparing provider matching accuracy and usability.

Project Boundaries

- HealthMatch will not directly enroll employees into healthcare plans—it only recommends providers.
- The initial version will focus on employer–provider matching within the U.S. healthcare market.
- Integration with third-party APIs (insurance provider APIs) may be implemented in later iterations.

Constraints

- Development must be completed within the academic term timeline.
- Limited budget for hosting or external APIs (mock data may be used).
- Must comply with data privacy and ethical standards (anonymized employee data).

Assumptions

- Management will provide accurate cost limits.
- Employees will complete preference surveys honestly.
- Provider data will be accessible via open or internal datasets.

Software Process Model Description

Chosen Model: Agile Software Development Model

HealthMatch will be developed using the Agile process model, emphasizing iterative development, team collaboration, and continuous feedback integration. Given the evolving nature of stakeholder needs and the emphasis on usability, Agile provides the flexibility required to refine the system incrementally as feedback is gathered.

Rationale for Choosing Agile

- **Iterative Progress:** The project can be broken into short sprints allowing continuous progress toward functional components like data collection, matching algorithms, and the user interface.
- **Flexibility and Adaptation:** Requirements such as new provider attributes or changes in cost criteria can be easily incorporated in future iterations without restarting development.
- **Team Collaboration:** Since each team member is responsible for distinct deliverables (diagrams, architecture, documentation), Agile encourages synchronized progress and easy integration of work.

Implementation for HealthMatch

1. **Requirements Gathering:**
 - a. Define initial functional and non-functional requirements through team discussion and feedback.
2. **Design Phase:**
 - a. Create UML diagrams (use case, class, sequence, and architecture) that evolve with each sprint.
3. **Implementation Phase:**
 - a. Develop modular features—starting with the employee input interface, provider database, and matching logic.
4. **Testing and Feedback:**
 - a. Conduct iterative testing after each sprint; verify usability and performance metrics.
5. **Deployment:**
 - a. Prepare a stable release version by the final sprint for demonstration.
6. **Maintenance and Improvement:**
 - a. Incorporate final feedback into post-release adjustments.

Expected Outcome

Using the Agile model ensures that HealthMatch remains adaptable and functional throughout its lifecycle. It allows the team to iteratively improve the application's performance, maintain usability, and align closely with stakeholder expectations, resulting in a reliable, scalable, and meaningful healthcare matching solution.