Functional requirements

1. **Employee and Project Management**
   1. The system shall allow the team manager to input details for all team members, including:
      * Working hours
      * Programming languages
      * Specific technical skills
   2. The system shall allow the team members to input details of:
      * Working hours
      * Programming languages
      * Upcoming vacations and constraints
   3. The system shall enable the manager to define projects with attributes such as:
      * Required hours
      * Technology stack
      * Assigned team members
   4. The system shall display an updated status board showing:
      * Current employee utilization
      * Resource allocation summaries
2. **Issue Tracking**
   1. The system shall include an issue creation feature, enabling managers to log issues like:
      * Employee leave (vacation, reserve duty, etc.)
      * Project delays
   2. Each issue shall allow input fields for:
      * Problem description
      * Start and end dates
      * Associated employees and projects
3. **Gap Analysis and Resolution**
   1. The system shall analyze resource gaps caused by logged issues and provide:
      * Alternative team members to fill the gap based on predefined attributes (e.g., hours, skills, language compatibility).
      * Scenarios showing how changes impact overall project status.
   2. Employees shall have an interface to input their availability and preferences for addressing gaps.
4. **Interactive Scheduling**
   1. The system shall provide a graphical user interface (GUI) that allows the manager to:
      * Adjust employee allocations interactively.
      * Simulate project outcomes based on different employee assignments.
   2. The interface shall provide real-time feedback on:
      * Updated project timelines
      * Employee workload balances
5. **Reporting and Visualization**
   1. The system shall generate reports and dashboards that include:
      * Weekly employee workload summaries
      * A visual representation of resource gaps and resolutions applied
   2. Reports shall be exportable in common formats (e.g., PDF, Excel). \*
6. **User Access and Security**
   1. The system shall provide role-based access control:
      1. Managers shall have full access to all features.
      2. Employees shall have restricted access, limited to:
         * Viewing their project assignments and schedules
         * Submitting availability and preferences
   2. All data shall be securely stored to protect sensitive employee and project information.
7. **Notifications and Alerts**
   1. The system shall notify employees and managers via email or in-app notifications about:
      * Assigned tasks and changes in schedules
      * Pending issues and deadlines
   2. Configurable alerts shall be available for critical updates, such as:
      * Resource shortages
      * Project delays
8. **Recommendation Feedback**
   1. After selecting one, The system shall allow the manager to provide ratings for the proposed solutions based on their effectiveness.
   2. Ratings shall be stored in the system to refine future recommendations by prioritizing solutions with higher ratings.