**Experiment – 2**

**Aim:** Functional and non-Functional components of Event Management System.

### **Functional Components**

* 1. **User Authentication & Authorization**
     1. Secure login and signup (JWT-based authentication)
     2. Role-based access control (admin, user)
  2. **Event Management**
     1. Add, edit, delete, and categorize events
     2. View event history
  3. **Multi-User Support**
     1. Different users can manage their own expenses
     2. Admin can oversee organization-wide expenses
  4. **Backup & Data Recovery**
     1. Cloud-based and external storage backups

### **Non-Functional Components**

* 1. **Performance**
     1. Fast response times using RESTful API
     2. Optimized database queries with MongoDB indexing
  2. **Scalability**
     1. Supports increasing number of users and expenses
     2. Cloud-based deployment ensures scalability
  3. **Security**
     1. Encrypted data storage for sensitive information
     2. Secure API calls with authentication tokens (JWT)
  4. **Usability**
     1. Intuitive UI/UX with React.js
     2. Responsive design for mobile, tablet, and desktop
  5. **Availability & Reliability**
     1. High uptime with reliable hosting
     2. Regular automated backups to prevent data loss
  6. **Maintainability**
     1. Modular codebase using the MERN stack
     2. Version control with Git for smooth updates

### **Conclusion**

The functional components ensure that users can efficiently manage and track their expenses, while the non-functional components guarantee system security, performance, and scalability. Together, these components contribute to a robust and user-friendly Expense Management System.