

# CampusConnect - MoSCoW Framework

## Project Overview

CampusConnect is a student-focused productivity and task management platform designed to help students organize assignments, set reminders, and manage campus life efficiently.

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## MUST HAVE (Critical Features)

### Core Functionality




#### 1. User Authentication

- Sign up / Sign in with Clerk integration
- Secure user sessions
- Profile management via UserButton

#### 2. Task Management

- Create tasks with title, description, due date
- Edit existing tasks (date, category, alarm)
- Delete tasks
- Mark tasks as pending/completed
- Task persistence via MongoDB backend

#### 3. Task Organization

- Priority levels (High, Medium, Low)
- Visual priority indicators (    )
- Sort tasks by priority and date
- Filter tasks (All, Pending, Completed)

#### 4. Essential UI/UX

- Responsive dashboard layout
- Clean, modern design with gradient branding
- Mobile-friendly navigation
- Loading states and error handling

#### 5. Navigation

- Home page with call-to-action

- Dashboard for logged-in users
  - Protected routes (redirect to login if not authenticated)
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## ● **SHOULD HAVE (Important but not Critical)**

### **Enhanced Features**

#### **1. Task Categorization**

- 7 categories: Academic, Self Care, Family, Work, Social, Health, Other
- Category badges with icons
- Ability to edit categories

#### **2. Reminder System**

- Optional alarm/reminder for tasks
- Time picker for setting alarm time
- Browser notifications when alarm triggers
- Sound notification (alarm tone)

#### **3. Additional Pages**

- About page explaining the platform
- Events page for campus activities
- Footer with copyright information

#### **4. Visual Enhancements**

- Priority-based color coding on task cards
- Status badges (completed/pending)
- Hover effects and transitions
- Glassmorphism effects on login page

#### **5. Data Persistence**

- Backend API integration (Node.js + MongoDB)
  - RESTful endpoints (GET, POST, PUT, DELETE)
  - User-specific task storage
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## **COULD HAVE (Desirable but not Essential)**

### **Nice-to-Have Features**

#### **1. Advanced Filtering**

- Filter by category
- Filter by date range
- Search functionality for tasks

#### **2. Task Analytics**

- Completion rate statistics
- Productivity insights
- Task distribution by category

#### **3. Collaboration Features**

- Share tasks with other students
- Group task lists for team projects
- Comments on tasks

#### **4. Calendar Integration**

- Calendar view of tasks
- Integration with Google Calendar
- Monthly/weekly task overview

#### **5. Customization**

- Dark/light theme toggle
- Custom categories
- Personalized dashboard layout
- Color themes for different priorities

#### **6. Notifications Enhancement**

- Email reminders
- SMS notifications
- Recurring reminders (daily, weekly)
- Snooze functionality

#### **7. Export/Import**

- Export tasks to CSV/PDF

- Import tasks from other platforms
  - Backup and restore functionality
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## **WON'T HAVE (Out of Scope for Current Version)**

### **Future Considerations**

#### **1. AI-Powered Features**

- AI task suggestions based on patterns
- Automatic priority assignment
- Smart deadline predictions

#### **2. Social Features**

- Social media integration
- Student forums/discussion boards
- Friend connections and activity feeds

#### **3. Advanced Integrations**

- Integration with university LMS (Canvas, Blackboard)
- Notion/Trello synchronization
- Microsoft Teams/Slack integration

#### **4. Mobile Application**

- Native iOS app
- Native Android app
- Offline mode with sync

#### **5. Gamification**

- Achievement badges
- Leaderboards
- Points system for task completion

#### **6. Advanced Analytics**

- Detailed performance reports
- Time tracking per task
- Productivity heatmaps

#### **7. Multi-language Support**

- Internationalization (i18n)
- Multiple language options

## 8. Video/Voice Features

- Voice notes for tasks
  - Video conferencing for team tasks
  - Voice commands
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## Implementation Priority

### Phase 1 (MVP) - MUST HAVE

- User authentication
- Basic task CRUD operations
- Priority system
- Simple filtering
- Responsive UI

### Phase 2 (Enhanced) - SHOULD HAVE

- Categories
- Reminder/alarm system
- Backend integration
- Additional pages (About, Events)

### Phase 3 (Advanced) - COULD HAVE

- Advanced filtering
- Analytics
- Collaboration
- Calendar integration

### Phase 4 (Future) - WON'T HAVE (Current Version)

- AI features
  - Native apps
  - Advanced integrations
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## Success Criteria

### MUST HAVE Completion

- ✓ User can create account and login
- ✓ User can create, edit, delete tasks
- ✓ Tasks persist across sessions
- ✓ Tasks can be organized by priority
- ✓ Basic filtering works (all/pending/completed)

### SHOULD HAVE Completion

- ✓ Categories implemented
- ✓ Reminder system functional
- ✓ Backend API operational
- ✓ About/Events pages created

### Overall Success

- 95%+ of MUST HAVE features implemented
  - 80%+ of SHOULD HAVE features implemented
  - Clean, bug-free user experience
  - Responsive across devices
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## Technical Debt & Maintenance

### Known Limitations

- Alarm check runs every 30 seconds (could be optimized)
- Browser notifications require user permission
- No offline functionality
- Limited error messages for users

### Future Improvements

- Real-time alarm checking with web workers
  - Better error handling and user feedback
  - Optimistic UI updates
  - Unit and integration tests
  - Performance optimization for large task lists
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**Document Version:** 1.0

**Last Updated:** December 2024

**Project Status:** Phase 2 Complete