

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.

● 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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Project Status: Phase 2 Complete