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COMPLETED THE PROJECT NAMED AS : -**THEME CUSTOMIZER IN WORDPRESS**

SUBMITTED BY ,

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**MVP IMPLEMENTATION**

**TITLE : THEME CUSTOMIZER IN WORDPRESS**

## 1. Project Setup

### Plugin Structure

Create main plugin directory: theme-customizer/

Set up folder structure:

theme-customizer/

├── assets/

│ ├── css/

│ ├── js/

│ └── images/

├── includes/

│ ├── admin/

│ ├── frontend/

│ └── customizer/

├── templates/

└── theme-customizer.php (main plugin file)

### Development Environment

* Install WordPress locally (XAMPP, Local, or Docker)
* Set up PHP debugging tools (Xdebug)
* Install browser DevTools for frontend testing
* Configure text editor/IDE (VS Code with WordPress extensions)

### Plugin Header Setup

* Define plugin metadata (name, version, author, description)
* Add WordPress hooks and filters
* Register plugin activation/deactivation functions
* Set up autoloading for classes

## 2. Core Features Implementation

### Customizer Panel Registration

* **Color Customization**
* Primary color picker
* Secondary color picker
* Background color options
* Text color controls
* Link color settings
* **Typography Controls**
* Font family selection (Google Fonts integration)
* Font size sliders for headings (H1-H6)
* Font size for body text
* Font weight options
* Line height controls
* Letter spacing adjustments
* **Layout Settings**
* Site width options (boxed/full-width)
* Sidebar position (left/right/none)
* Header layout variations
* Footer layout options
* Content padding controls
* **Header Customization**
* Logo upload
* Site title/tagline toggle
* Header height control
* Navigation menu styling
* Header background options
* **Footer Customization**
* Footer widget areas
* Copyright text editor
* Social media links
* Footer background styling

### Live Preview Functionality

* Implement real-time preview using WordPress Customizer API
* Add postMessage transport for instant updates
* Create selective refresh for complex elements
* Implement preview iframe communication

### Settings API Integration

* Register all settings with WordPress Settings API
* Add sanitization callbacks for each setting
* Implement validation functions
* Set default values for all options

## 3. Data Storage (Local State / Database)

### WordPress Options Table

* Store customizer settings in wp\_options table
* Create unique option names with prefix (e.g., tc\_primary\_color)
* Use serialized arrays for grouped settings
* Implement options caching for performance

### Custom Database Tables (if needed)

* Create custom table for advanced configurations:

CREATE TABLE wp\_theme\_customizer\_presets (

id INT AUTO\_INCREMENT PRIMARY KEY,

preset\_name VARCHAR(255),

settings LONGTEXT,

created\_at DATETIME,

updated\_at DATETIME

)

### Data Structure

* **Settings Organization:**
* Colors: Array of color values
* Typography: Nested arrays for each element
* Layout: Dimension and positioning values
* Media: Image URLs and IDs

### Export/Import Functionality

* Create JSON export of all settings
* Import validation and sanitization
* Backup current settings before import
* Error handling for corrupted imports

## 4. Testing Core Features

### Functional Testing

* **Color Changes:**
* Verify color picker functionality
* Test color application to elements
* Check color contrast for accessibility
* Validate hex/RGB/RGBA values
* **Typography:**
* Test font loading from Google Fonts
* Verify font size changes across devices
* Check font weight rendering
* Test fallback fonts
* **Layout:**
* Test responsive behavior at different breakpoints
* Verify sidebar positioning
* Check header/footer layouts
* Test content area width changes

### Compatibility Testing

* Test with default WordPress themes (Twenty Twenty-Four, etc.)
* Test with popular third-party themes
* Verify compatibility with common plugins
* Check for JavaScript conflicts

### Browser Testing

* Chrome/Edge (latest versions)
* Firefox (latest version)
* Safari (macOS and iOS)
* Mobile browsers (Chrome, Safari)

### Performance Testing

* Measure page load times
* Check database query efficiency
* Monitor memory usage
* Test with GTmetrix or Google PageSpeed

### Security Testing

* Validate all user inputs
* Test for XSS vulnerabilities
* Check nonce verification
* Test capability checks for admin functions
* Sanitize all output data

### Version Control(GitHub)

### Repository Setup

* Initialize Git repository
* Create .gitignore file:

node\_modules/

.DS\_Store

\*.log

wp-config.php

.env

* Create README.md with project description
* Add LICENSE file (GPL v2 or later for WordPress)

### Branch Strategy

* **main/master:** Production-ready code
* **develop:** Development branch
* **feature/[feature-name]:** Individual features
* **bugfix/[bug-name]:** Bug fixes

### Commit Guidelines

* Use descriptive commit messages
* Follow conventional commits format:
* feat: New features
* fix: Bug fixes
* docs: Documentation changes
* style: Code formatting
* refactor: Code restructuring
* test: Testing additions

### Documentation

* Create CHANGELOG.md
* Document installation instructions
* Add code comments for complex functions
* Create inline documentation (PHPDoc)
* Document all filters and hooks

### Milestones & Issues

* Create GitHub Issues for each task
* Use labels (bug, enhancement, documentation)
* Set up project board for task tracking
* Create milestones for Phase 3 completion