# Frontend & Backend Practice Projects for Beginners to Mid-level Developers

## Frontend (ReactJS) Projects

### Recipe Search App with Filters

Build a recipe search app using ReactJS. Users can search for recipes by keyword.  
- Use an open API (like Edamam or TheMealDB) or mock data.  
- Add filters: ingredients, calories, diet (vegan, keto), meal type.  
- Show results with thumbnails and recipe links.  
- Bonus: Save favorite recipes using localStorage.

### Multi-Step Form Wizard

Create a responsive multi-step form for collecting user data.  
- Each step has a set of fields (e.g., personal info, preferences, review).  
- Validate fields at each step.  
- Add a progress bar and back/next buttons.  
- Use libraries like Formik and Yup for validation.

### Habit Tracker

Track and visualize user habits on a daily basis.  
- Users can create custom habits and mark them complete.  
- Show a calendar view or checklist per day.  
- Track streaks and progress.  
- Store data in localStorage or use a backend.

### Budget Planner

Manage personal budgets with income and expense tracking.  
- Input different income sources and expenses.  
- Categorize expenses (food, travel, bills).  
- Show remaining budget dynamically.  
- Bonus: Use chart libraries to visualize spending.

### Productivity Timer with Pomodoro Technique

Build a Pomodoro timer for productivity sessions.  
- Default: 25 mins focus, 5 mins short break, 15 mins long break.  
- Add animated progress indicator.  
- Optional: Sounds and session history.  
- Use state and effect hooks to manage timers.

### Travel Bucket List Map

Let users create a personalized travel wishlist on an interactive map.  
- Use Google Maps or Mapbox API.  
- Add and name locations as pins.  
- Save notes or images for each location.  
- Save state using localStorage or backend.

### Daily Affirmation & Gratitude Journal

A calming app for daily self-reflection and motivation.  
- Show a random motivational quote each day (API or JSON).  
- Let users write and save a daily gratitude note.  
- Add soft UI animations for a relaxing experience.  
- Store journals locally or connect with backend.

### Movie Mood Matcher

Suggest movies based on the user's current mood.  
- User selects a mood (happy, sad, excited, etc.).  
- Use The Movie DB API to fetch relevant movies.  
- Show details: poster, title, rating, synopsis.  
- Option to save favorite movies.

## Backend (Node.js + Express.js) Projects

### RESTful Blog API

Create a blog backend with CRUD operations for posts and comments.  
- Use MongoDB and Express.  
- Add routes for creating, reading, updating, and deleting posts.  
- Bonus: Add user login and authentication.

### Weather Logger

An API that logs weather data for different cities.  
- Use a weather API to fetch current data.  
- Save results in a database.  
- Provide endpoints for CRUD operations.

### Short URL Generator

Shorten long URLs and redirect using short IDs.  
- Generate short IDs using a library or custom logic.  
- Store mappings in a database.  
- Handle redirection.

### JWT Authentication System

Secure authentication using JSON Web Tokens.  
- Users can register and login.  
- Generate and verify tokens on protected routes.  
- Optional: Add refresh token mechanism.

### Feedback Collector API

Collect and manage user feedback via POST requests.  
- Store feedback in a database.  
- Admin route to view all feedback.  
- Optional: Add rating and export feature.

### Task Queue API

Simulate a background task queue.  
- Accept tasks via API and store in DB.  
- Use setInterval or cron to process tasks.  
- Log task status.

### Chatroom Backend

Create a simple chat backend using WebSockets.  
- Use Socket.io with Express.  
- Handle multiple users and rooms.  
- Broadcast messages within rooms.

### E-commerce Cart API

Build backend for cart functionality.  
- Add/remove/update cart items.  
- Calculate totals and apply discounts.  
- Link carts to users.

### Quiz Management API

Manage quiz questions and sessions.  
- Admin CRUD for questions and answers.  
- Public endpoints to fetch quiz data.  
- Endpoint to validate user answers.

### PDF Invoice Generator

Generate invoices from order data.  
- Accept customer and order info.  
- Use PDF libraries like pdfkit.  
- Return downloadable PDF file.