# Creating a new React Monorepo

Content Url: https://nx.dev/getting-started/tutorials/react-monorepo-tutorial#creating-a-new-react-monorepo

Step 1: Create Nx Workspace:

npx create-nx-workspace@latest react-monorepo --preset=react-monorepo

Step 2: Generate Libraries

nx generate @nx/react:library task-manager-features --directory=libs/task-manager/features --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:library task-manager-core --directory=libs/task-manager/core --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:library task-manager-shared --directory=libs/task-manager/shared --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:library task-manager-models --directory=libs/task-manager/models --unitTestRunner=vitest --bundler=vite

Step 3: Generate Components

nx generate @nx/react:component task-list --directory=libs/task-manager/features/task-list --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component task-list-item --directory=libs/task-manager/features/task-list --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component add-task-form --directory=libs/task-manager/features/add-task-form --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component edit-task --directory=libs/task-manager/features/edit-task --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component dialog --directory=libs/task-manager/features/common/dialog --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component main-header --directory=libs/task-manager/features/common/layout/main-header --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component task-details --directory=libs/task-manager/features/tasks/task-details --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component breadcrumbs --directory=libs/task-manager/features/common/layout/breadcrumbs --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component pagination --directory=libs/task-manager/features/common/layout/pagination --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component spinner --directory=libs/task-manager/features/common/spinner --unitTestRunner=vitest --bundler=vite

Step 4: Generate Additional Commands

nx generate @nx/react:library date-utils --directory=libs/task-manager/core/date-utils --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:library validation-utils --directory=libs/task-manager/core/validation-utils --unitTestRunner=vitest --bundler=vite

then run the command:

npm install -g vite

Reemove my-feature-lib from the workspace:

nx g @nx/workspace:remove my-feature-lib

Install React Fluent UI Component:

Reference: https://www.npmjs.com/package/@fluentui/react-components

npm i @fluentui/react-components

Set up JSON Server

Reference: https://www.npmjs.com/package/json-server

npm install json-server

Install Axios HTTP Library

npm install axios

# Section 1: Introduction

* Introduction to the course and the Task Manager application
* Overview of what will be covered in the tutorial:

# Section 2: Setting Up the Environment

* Installing Node.js and npm:

npm install -g npm@latest

* Installing Nx CLI globally:

npm install -g vite

* Installing Json Server:

npm install json-server

# Section 3: Creating React Monorepo Applications

* Creating a new Nx workspace for the Task Manager project:

npx create-nx-workspace@latest react-monorepo --preset=react-monorepo

npx nx g @nx/react:app inventory --directory=apps/inventory --dry-run

* Exploring the initial file structure of the React app
* Understanding the configuration files

# Section 4: Creating React Libraries

* Creating necessary react libraries for the task manager app:

nx generate @nx/react:library task-manager-components --directory=libs/task-manager/ components --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:library task-manager-core --directory=libs/task-manager/core --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:library task-manager-models --directory=libs/task-manager/models --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:library shared --directory=libs/shared --unitTestRunner=vitest --bundler=vite

# Section 5: Creating React Components

* Creating necessary react components for the task manager app:

nx generate @nx/react:component task-list --directory=libs/task-manager/components/tasks/task-list --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component task-form --directory=libs/task-manager/components/tasks/task-form --unitTestRunner=vitest --bundler=vite

nx generate @nx/react:component task-details --directory=libs/task-manager/components/tasks/task-details --unitTestRunner=vitest --bundler=vite

# Section 6: Managing Task State with MobX

* Introduction to state management with MobX:

npm install mobx mobx-react –save

* Setting up MobX store for managing tasks.
* Creating MobX actions and observables for task manipulation.
* Connecting React components to the MobX store.

# Section 7: Integrating APIs

* Setting up a mock API server using JSON Server:

npm install json-server

* Install Axios Library:

npm install axios

* Fetching tasks data from the API using Axios or Fetch.
* Implementing CRUD operations for tasks (Create, Read, Update, Delete) with MobX actions.

# Section 8: Testing with ViTest

* Introduction to unit testing with ViTest.
* Writing unit tests for task management features.

# Section 9: Deployment

* Building the Task Manager app for production.
* Configuring deployment options (e.g., Vercel, Netlify, etc.).
* Deploying the app to a hosting platform.

# Section 10: Conclusion

Recap of what was covered in the tutorial.

Encouragement for further exploration and learning.

Thanking the viewers for participating.