Company Name : AFFORDMED

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Project Title:

URL Shortener Application (Frontend Developer Task)

1. Introduction

This project is a simple URL Shortener application built using React.js.

The purpose of this project is to provide a clean frontend implementation where users can input a long URL, generate a short code for it, and manage the links effectively.

2. Objectives

- To create a frontend application using React.
- To implement routing and navigation using React Router.
- To provide features for URL shortening, redirecting, and displaying usage

  statistics. To store the data locally using browser localStorage.
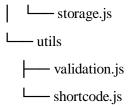- To design a simple and user-friendly UI with CSS.

3. Tech Stack

- Frontend Framework: React.js
- Routing: React Router DOM
- Storage: Browser LocalStorage
- Styling: CSS (App.css + index.css)

4. Folder Structure

```
src
├── App.js
├── App.css
├── index.js
├── index.css
├── components
│   └── UrlRow.jsx
├── pages
│   ├── ShortenerPage.jsx
│   ├── StatsPage.jsx
│   └── RedirectPage.jsx
├── services
```

```
    |    └── storage.js
    └── utils
        ├── validation.js
        └── shortcode.js
```

5. Features

1. Shorten URL → User can enter a long URL and generate a short code.

2. List of URLs → All shortened links are stored and displayed.

3. Redirect → When a user visits /shortcode, it redirects to the original URL.

4. Statistics → Shows how many times each short link was visited.

5. Validation → Checks if the entered URL is valid before shortening.

6. Local Storage → Data is persisted in the browser for future sessions.

6. Components & Pages

- ShortenerPage.jsx – Main page with form and list of URLs.

- UrlRow.jsx – Reusable component to display each URL entry.

- StatsPage.jsx – Page showing visit counts of all shortened URLs.

- RedirectPage.jsx – Handles redirecting from short code to original URL. storage.js – Handles storing & retrieving data from localStorage.

- validation.js – Validates if input is a correct URL. shortcode.js – Generates random short codes.

7. How to Run the Project

1. Clone or download the project.

2. Open terminal and navigate to project folder:

- cd url-shortener

- npm install

- npm install react-router-dom

- npm start

3. Open browser at http://localhost:3000/

8. Conclusion

This project demonstrates how to build a functional URL Shortener frontend using React. It covers concepts like component structure, routing, state management, validation, and local storage usage. The application is simple, extendable, and can be integrated with a backend API in the future.