Task Manager API - Documentation & Report

1. Introduction

This document provides the API documentation and project report for a simple Task Manager REST API built using Node.js and Express in the MERN stack. The API allows users to perform basic CRUD (Create, Read, Update, Delete) operations on tasks stored in an in-memory array. The project follows a modular structure with separate folders for models, routes, and controllers.

2. Project Structure

The project is organized into the following folders:
- `models/`: Contains the initial list of tasks.
- `controllers/`: Handles the core logic of CRUD operations.
- `routes/`: Defines the API routes and connects them with controller functions.
- `.env`: Stores configuration like PORT.

3. API Endpoints

GET /tasks

Description: Returns all the tasks.
Response Example:

```
{
  "message": "List of Task is : ",
  "tasks": [ ... ]
}
```

GET /tasks/:id

Description: Returns a single task by ID.
Response Example:

```
{
  "message": "Task is : ",
```

```
 "tasks": { ... }
}
```

POST /tasks

Description: Creates a new task.
Request Body:

```
{
 "title": "Next.js",
 "name": "Rohit",
 "description": "Start with Next.js",
 "dueDate": "2025-07-25"
}
```

Response Example:

```
{
 "message": "Task added successfully",
 "tasks": { ... }
}
```

PUT /tasks/:id

Description: Updates an existing task.
Response Example:

```
{
 "message": "Task updated successfully"
}
```

DELETE /tasks/:id

Description: Deletes a task by ID.
Response Example:

```
{
 "message": "Task deleted successfully",
 "remove": { ... }
```

```
}
```

4. Sample Model (models/Todo.js)

```
let tasks = [
 { id: 1, title: 'Node.js', name: 'Ronaldo', description: 'Start with Node.js', dueDate: '2025-06-15' },

 { id: 2, title: 'React.js', name: 'Virat', description: 'Start with React.js.', dueDate: '2025-05-21' },

 { id: 3, title: 'Learn Node.js', name: 'Messi', description: 'Start with Express.js.', dueDate: '2025-06-23' }
];

module.exports = tasks;
```

5. .env Configuration
```
PORT=5000
```

6. Conclusion
This Task Manager API demonstrates basic server-side development with Node.js and Express, emphasizing clean project structure, modularity, and RESTful principles.