 Marwadi University Marwadi Chandarana Group	NAAC A+	Marwadi University Faculty of Technology Department of Information and Communication Technology	
Subject: Advanced Web Technology (01CT1625)		Aim: Database: using MongoDB, NodeJS and ReactJS, build a project to fetch and post data from frontend to database.	
Practical Task :- 12		Date:-	Enrollment No:- 92200133030

Objective:- Database: using MongoDB, NodeJS and ReactJS, build a project to fetch and post data from frontend to database.

Code :-

mongo_client :-

App.jsx


```
import { useState, useEffect } from 'react';
import axios from 'axios';
import AddBlogs from './components/AddBlogs';
import BlogsTable from './components/BlogsTable';
import './App.css';

const API_URL = 'http://localhost:3000/api/blogs';

const App = () => {
  const [blogs, setBlogs] = useState([]);
  const [editingBlog, setEditingBlog] = useState(null);
  const [loading, setLoading] = useState(false);
  const [error, setError] = useState('');

  useEffect(() => {
    fetchBlogs();
  }, []);

  const fetchBlogs = async () => {
    setLoading(true);
    try {
      const response = await axios.get(API_URL);
      setBlogs(response.data.blogs);
      setError('');
    } catch (error) {
      console.error('Error fetching blogs:', error);
      setError('Failed to fetch blogs. Try again later.');
```

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```

    }
    fetchBlogs();
  } catch (error) {
    console.error('Error adding/updating blog:', error);
    setError('Failed to save blog.');
```

```

  };

const deleteBlog = async (id) => {
  if (!window.confirm('Are you sure you want to delete this blog?')) return;

  try {
    if (!id) {
      throw new Error('Blog ID is required');
    }
    const response = await axios.delete(`${API_URL}/${id}`);
    if (response.data) {
      setBlogs((prevBlogs) => prevBlogs.filter((blog) => blog._id !== id));
      setError('');
    }
  } catch (error) {
    console.error('Error deleting blog:', error);
    const errorMessage = error.response?.data?.message || 'Failed to delete blog. Please check if the ID is valid.';
    setError(errorMessage);
  }
};

return (
  <div className="container">
    <h1>Blog Management System</h1>
    {loading && <p>Loading...</p>}
    {error && <p className="error">{error}</p>}
    <AddBlogs onAdd={addBlog} editingBlog={editingBlog} />
    <BlogsTable
      blogs={blogs}
      onEdit={setEditingBlog}
      onDelete={deleteBlog}
    />
  </div>
);
};

export default App;


```

App.css

```

/* Import Poppins Font */
@import url('https://fonts.googleapis.com/css2?family=Poppins:wght@300;400;500;600&display=swap');

```

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```

/* General Reset */
* {
  box-sizing: border-box;
  margin: 0;
  padding: 0;
}

/* Full-Screen Layout */
body {
  font-family: 'Poppins', sans-serif;
  background: linear-gradient(135deg, #74EBD5, #ACB6E5);
  color: #333;
  min-height: 100vh;
  display: flex;
  justify-content: center;
  align-items: center;
  padding: 20px;
}



/* Main Container */
.container {
  background: #fff;
  box-shadow: 0 10px 20px rgba(0, 0, 0, 0.1);
  border-radius: 12px;
  max-width: 1200px;
  width: 100%;
  padding: 40px;
  animation: fadeIn 0.8s ease-in-out;
  transition: all 0.3s;
}

/* Header Styling */
h1 {
  color: #4CAF50;
  font-size: 36px;
  margin-bottom: 20px;
  text-align: center;
}

/* Form Styling */
form {
  display: grid;
  grid-template-columns: repeat(4, 1fr);
  gap: 20px;
  padding: 20px 0;
}

form input {
  padding: 12px;

```

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```

border: 1px solid #ccc;
border-radius: 8px;
font-size: 16px;
color: #333;
transition: all 0.3s;
}

form input:focus {
  outline: none;
  border-color: #4CAF50;
  box-shadow: 0 0 8px rgba(76, 175, 80, 0.5);
}

form button {
  grid-column: span 4;
  padding: 14px;
  background: #4CAF50;
  color: white;
  border: none;
  border-radius: 8px;
  font-size: 16px;
  cursor: pointer;
  transition: background 0.3s, transform 0.2s;
}

form button:hover {
  background: #45a049;
  transform: scale(1.05);
}



form button:active {
  transform: scale(0.95);
}

/* Table Styling */
table {
  width: 100%;
  border-collapse: collapse;
  margin-top: 20px;
}

thead {
  background: #4CAF50;
  color: white;
}

th, td {
  padding: 10px;
  text-align: center;
  border-bottom: 1px solid #ddd;

```

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```

    font-size: 16px;
  }

tbody tr:hover {
  background: #f1f1f1;
}

/* Alternating row colors */
tbody tr:nth-child(even) {
  background: #f9f9f9;
}

/* Button Styling */
button {
  cursor: pointer;
  transition: all 0.3s ease;
}


/* Edit and Delete Buttons */
.edit-btn {
  background: #2196F3;
  color: white;
  border: none;
  padding: 10px 20px;
  border-radius: 8px;
  font-size: 14px;
  margin-right: 5px;
  transition: 0.3s;
  margin-bottom: 2px;
  width: 90px;
}

.edit-btn:hover {
  background: #1976D2;
  transform: scale(1.05);
}

.delete-btn {
  background: #f44336;
  color: white;
  border: none;
  padding: 10px 20px;
  border-radius: 8px;
  font-size: 14px;
  transition: 0.3s;
  width: 90px;
}

.delete-btn:hover {
  background: #d32f2f;

```

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```

    transform: scale(1.05);
  }

/* Animation */
@keyframes fadeIn {
  from {
    opacity: 0;
    transform: translateY(-30px);
  }
  to {
    opacity: 1;
    transform: translateY(0);
  }
}

/* Responsive Design */
@media (max-width: 1024px) {
  form {
    grid-template-columns: repeat(2, 1fr);
  }

  form button {
    grid-column: span 2;
  }

  th, td {
    font-size: 14px;
    padding: 12px;
  }
}

@media (max-width: 768px) {
  form {
    grid-template-columns: 1fr;
  }



  form button {
    grid-column: span 1;
  }

  th, td {
    font-size: 12px;
    padding: 10px;
  }

  .container {
    padding: 20px;
  }

  h1 {

```

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```

    font-size: 28px;
  }
}

```

Components/AddBlogs.jsx

```

import React, { useState, useEffect } from 'react';

const AddBlogs = ({ editingBlog, onAdd }) => {
  const [id, setId] = useState('');
  const [title, setTitle] = useState('');
  const [authorName, setAuthorName] = useState('');
  const [date, setDate] = useState('');
  const [content, setContent] = useState('');


  // Pre-fill form with existing data during editing
  useEffect(() => {
    if (editingBlog) {
      setId(editingBlog._id);
      setTitle(editingBlog.title);
      setAuthorName(editingBlog.author);
      setDate(editingBlog.date.split('T')[0]);
      setContent(editingBlog.description);
    } else {
      // Reset form when not editing
      setId('');
      setTitle('');
      setAuthorName('');
      setDate('');
      setContent('');
    }
  }, [editingBlog]);

  const handleSubmit = async (e) => {
    e.preventDefault();

    const blogData = {
      _id: id,
      title: title,
      author: authorName,
      description: content,
      date: date || new Date().toISOString().split('T')[0] // Use current date if none provided
    };

    try {
      await onAdd(blogData);
      alert(`Blog ${editingBlog ? 'updated' : 'added'} successfully!`);
    } catch (error) {
      console.error('Error saving blog:', error);
      alert('Failed to save blog');
    }
  }
}

```

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```


}

// Clear form after submission
setId('');
setTitle('');
setAuthorName('');
setDate('');
setContent('');
};

return (
  <form onSubmit={handleSubmit}>
    <input
      type="text"
      placeholder="Title"
      value={title}
      onChange={(e) => setTitle(e.target.value)}
      required
    />
    <input
      type="text"
      placeholder="Author Name"
      value={authorName}
      onChange={(e) => setAuthorName(e.target.value)}
      required
    />
    <input
      type="text"
      placeholder="Content"
      value={content}
      onChange={(e) => setContent(e.target.value)}
      required
    />
    <input
      type="date"
      placeholder="Date"
      value={date}
      onChange={(e) => setDate(e.target.value)}
      required
    />
    <button type="submit">
      {editingBlog ? 'Update Blog' : 'Add Blog'}
    </button>
  </form>
);
};

export default AddBlogs;

```



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Components/BlogsTable.jsx

```
import React from 'react';

const BlogsTable = ({ blogs, onEdit, onDelete }) => {
  if (!blogs || !Array.isArray(blogs) || blogs.length === 0) {
    return <p>No blogs available.</p>;
  }

  return (
    <div>
      <h2>Blogs</h2>
      <table>
        <thead>
          <tr>
            <th>ID</th>
            <th>Title</th>
            <th>Author Name</th>
            <th>Content</th>
            <th>Date</th>
            <th>Actions</th>
          </tr>
        </thead>
        <tbody>
          {blogs.map((blog) => (
            <tr key={blog._id}>
              <td>{blog._id}</td>
              <td>{blog.title}</td>
              <td>{blog.author}</td>
              <td>{blog.description}</td>
              <td>{new Date(blog.date).toLocaleDateString().split('T')[0]}</td>
              <td>
                <button
                  className="edit-btn"
                  onClick={() => onEdit(blog)}
                >
                  Edit
                </button>
                <button
                  className="delete-btn"
                  onClick={() => onDelete(blog._id)}
                >
                  Delete
                </button>
              </td>
            </tr>
          ))}
        </tbody>
      </table>
    </div>
  );
}
```

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```

    </div>
  );
};

export default BlogsTable;

```

mongo_server :-

index.js :-

```

const express = require("express");
const app = express();
const port = 3000;
const cors = require("cors");
app.use(
  cors({
    origin: "http://localhost:5173",
  })
);

//middleware
app.use(express.json());
app.use(express.urlencoded({ extended: true }));

const dbConfig = require("../src/config/db.config");

const mongoose = require("mongoose");

mongoose.Promise = global.Promise;


mongoose
  .connect(dbConfig.url, {
    useNewUrlParser: true,
    useUnifiedTopology: true,
  })
  .then(() => {
    console.log("Sucessfully Connected to the Database");
  })
  .catch((err) => {
    console.log("Error in Database connection ", err);
    process.exit();
  });

const blogRouter = require("../src/blog/blog.routes");

app.use("/api/blogs", blogRouter);

app.get("/", (req, res) => res.send("Welcome to the API of AWT Experiment - 6 API"));

```

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```
app.listen(port, () => console.log(`Server is running on http://localhost:${port}`));
```

config/db.config.js :-

```
module.exports = {
  url: "mongodb://127.0.0.1:27017/exp_6_blog",
};
```

blog/blo.controller.js


```
const blogService = require("../blog/blog.services");

exports.create = async (req, res) => {
  const { title, description, author, date } = req.body;
  if (!title || !description || !author) {
    return res.status(400).json({ message: "Fields are empty" });
  }

  try {
    const blog = await blogService.createBlog(title, description, author, date);
    res.status(201).json({ message: "Blog created successfully", blog });
  } catch (err) {
    console.error("Error creating blog:", err);
    res.status(500).json({ error: "Internal server error" });
  }
};

exports.findAll = async (req, res) => {
  try {
    const blogs = await blogService.findAllBlogs();
    res.send({ message: "Blogs data", blogs });
  } catch (err) {
    console.error("Error fetching blogs:", err);
    res.status(500).json({ error: "Internal server error" });
  }
};

exports.findOne = async (req, res) => {
  const id = req.params._id;
  try {
    const blog = await blogService.findBlogById(id);
    if (!blog) {
      return res.status(400).json({ message: "No blog found with id: " + id });
    }
    res.json({ message: "Data found", blog });
  } catch (err) {
    console.error("Error fetching blog by id:", err);
    res.status(500).json({ error: "Internal server error" });
  }
};
```

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```

exports.update = async (req, res) => {
  const id = req.params.id;
  const updateData = req.body;
  try {
    const result = await blogService.updateBlog(id, updateData);
    if (!result) {
      return res.status(400).json({ message: "No blog found with id: " + id });
    }
    res.json({ message: "Blog updated successfully" });
  } catch (err) {
    console.error("Error updating blog:", err);
    res.status(500).json({ error: "Internal server error" });
  }
};

exports.delete = async (req, res) => {
  const id = req.params.id;
  try {
    const result = await blogService.deleteBlog(id);
    if (!result) {
      return res.status(400).json({ message: "No blog found with id: " + id });
    }
    res.json({ message: "Blog deleted successfully" });
  } catch (err) {
    console.error("Error deleting blog:", err);
    res.status(500).json({ error: "Internal server error" });
  }
};

```


blog/blog.model.js

```

const mongoose = require("mongoose");

var schema = new mongoose.Schema(
  {
    title: {
      type: String,
      required: true,
    },
    description: {
      type: String,
      required: true,
    },
    author: {
      type: String,
      required: true,
    },
    date: {
      type: Date,

```

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```

    default: Date.now(),
    required: true,
  }
},
{
  timestamps: true,
}
);

var blog = new mongoose.model("exp_6_blog", schema);
module.exports = blog;

```

blog/blog.routes.js

```

const blog = require("../blog/blog.controller");
const express = require("express");
const router = express.Router();

router.post("/", blog.create);
router.get("/", blog.findAll);
router.get("/:id", blog.findOne);
router.put("/:id", blog.update);
router.delete("/:id", blog.delete);
module.exports = router;

```

blog/blog.services.js

```

const BlogModel = require("../blog/blog.model");



exports.createBlog = async (title, description, author , date) => {
  const blog = new BlogModel({
    title,
    description,
    author,
    date
  });
  return await blog.save();
};

exports.findAllBlogs = async () => {
  return await BlogModel.find();
};

exports.findBlogById = async (id) => {
  return await BlogModel.findById(id);
};

exports.updateBlog = async (id, updateData) => {

```

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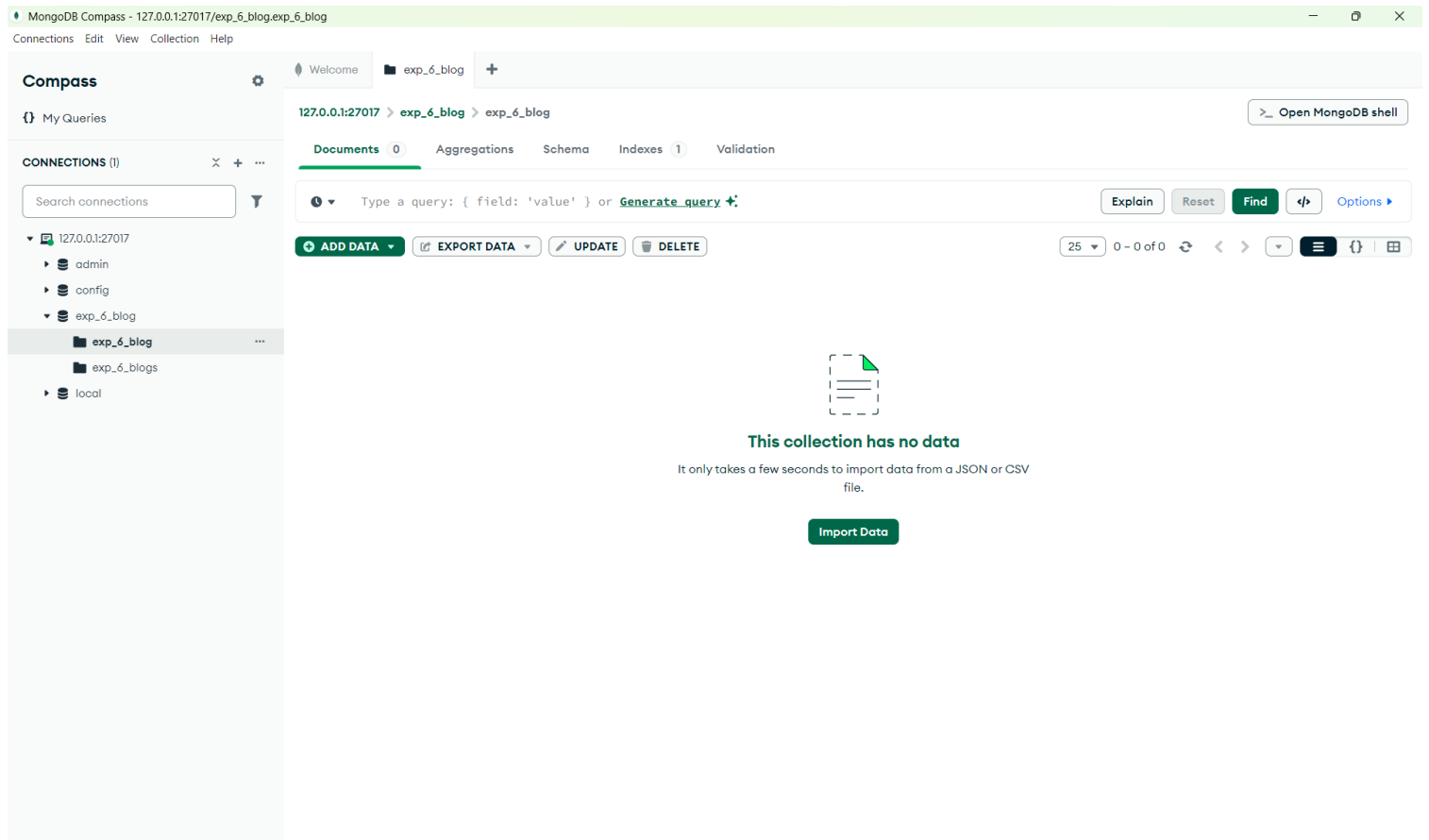
```


return await BlogModel.findByIdAndUpdate(id, updateData, {
  useFindAndModify: false,
});
};

exports.deleteBlog = async (id) => {
  return await BlogModel.findByIdAndDelete(id);
};

```

Output :-



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Blog Management System

Failed to fetch blogs. Try again later.

Add Blog



No blogs available.

Blog Management System

Failed to fetch blogs. Try again later.

Add Blog

No blogs available.

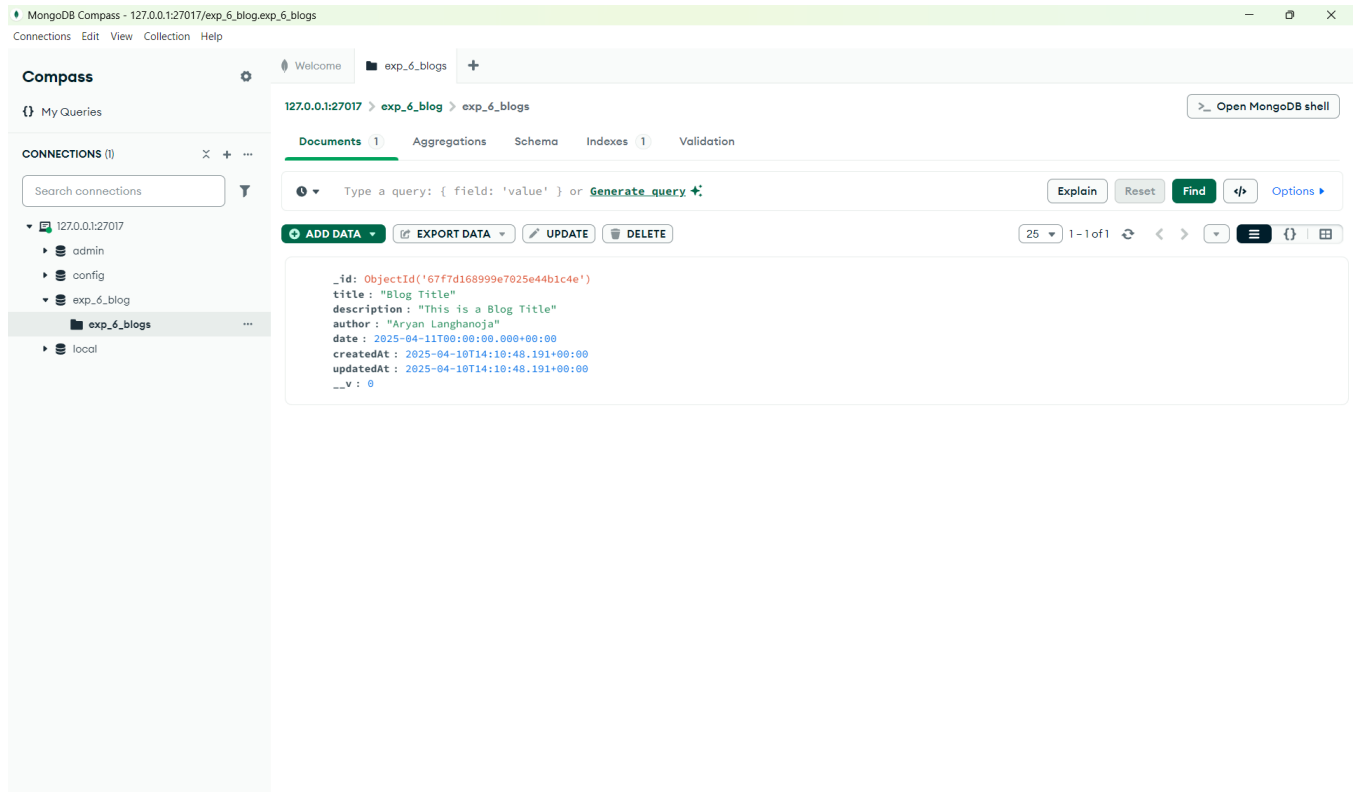
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Blog Management System

Add Blog

Blogs

ID	Title	Author Name	Content	Date	Actions
67f7d168999e7025e44b1c4e	Blog Title	Aryan Langhanoja	This is a Blog Title	4/11/2025	<div style="display: flex; justify-content: space-around;"> <div style="background-color: blue; color: white; padding: 2px 5px;">Edit</div> <div style="background-color: red; color: white; padding: 2px 5px;">Delete</div> </div>




The screenshot shows the MongoDB Compass interface. The left sidebar displays the 'CONNECTIONS' list with '127.0.0.1:27017' selected, and the 'exp_6_blogs' collection is highlighted. The main panel shows the 'Documents' tab for the 'exp_6_blogs' collection. A single document is displayed with the following fields:

```

{
  "_id": ObjectId("67f7d168999e7025e44b1c4e"),
  "title": "Blog Title",
  "description": "This is a Blog Title",
  "author": "Aryan Langhanoja",
  "date": "2025-04-11T00:00:00.000+00:00",
  "createdAt": "2025-04-10T14:10:48.191+00:00",
  "updatedAt": "2025-04-10T14:10:48.191+00:00",
  "__v": 0
}

```


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Blog Management System

Update Blog

Blogs



ID	Title	Author Name	Content	Date	Actions
67f7d168999e7025e44b1c4e	Blog Title	Aryan Langhanoja	This is a Blog Title	4/11/2025	Edit Delete

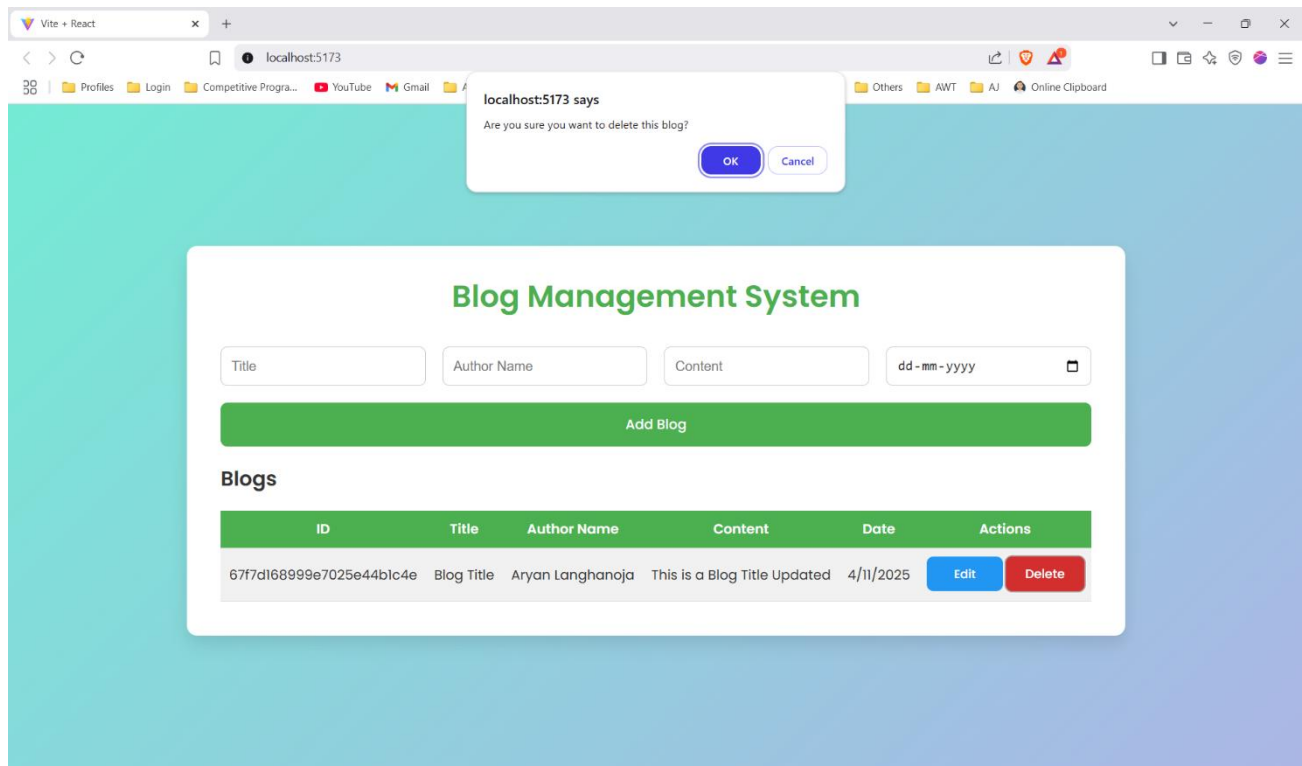
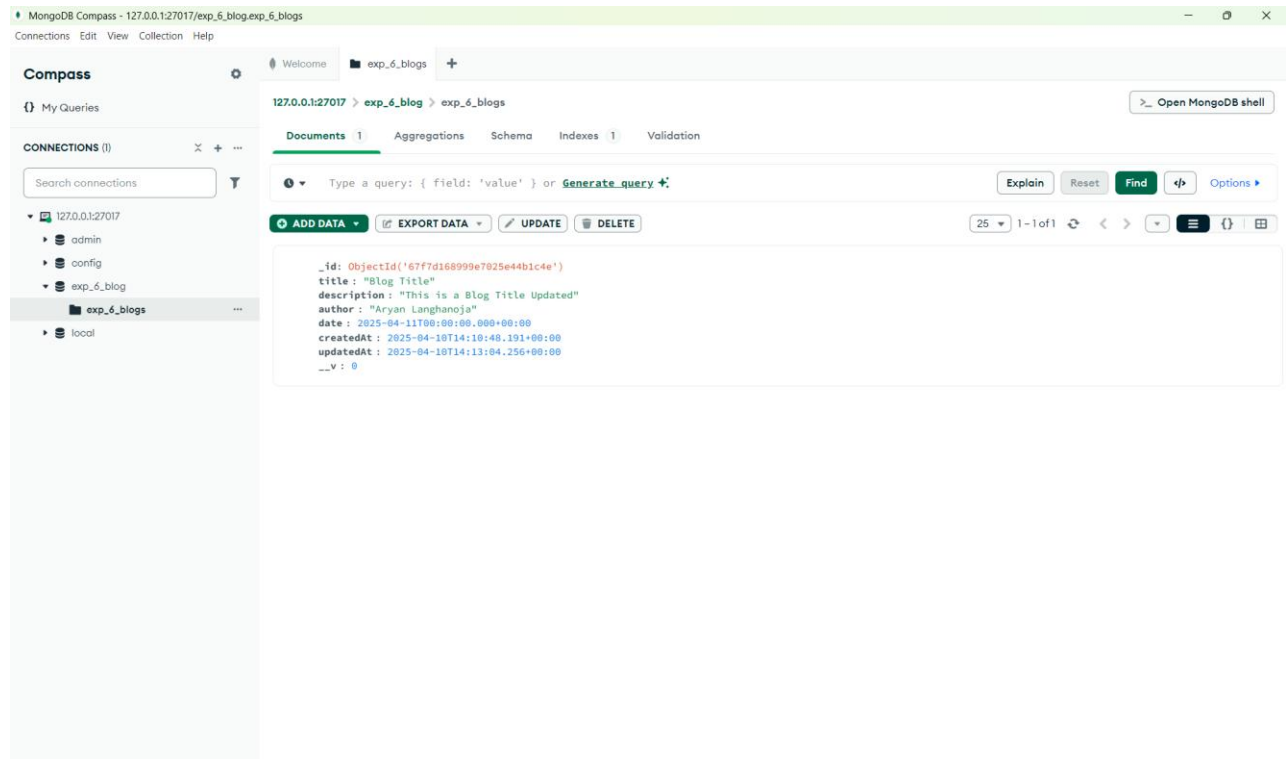
Blog Management System


Add Blog

Blogs

ID	Title	Author Name	Content	Date	Actions
67f7d168999e7025e44b1c4e	Blog Title	Aryan Langhanoja	This is a Blog Title Updated	4/11/2025	Edit Delete

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