

Oexamination

Online Examination System



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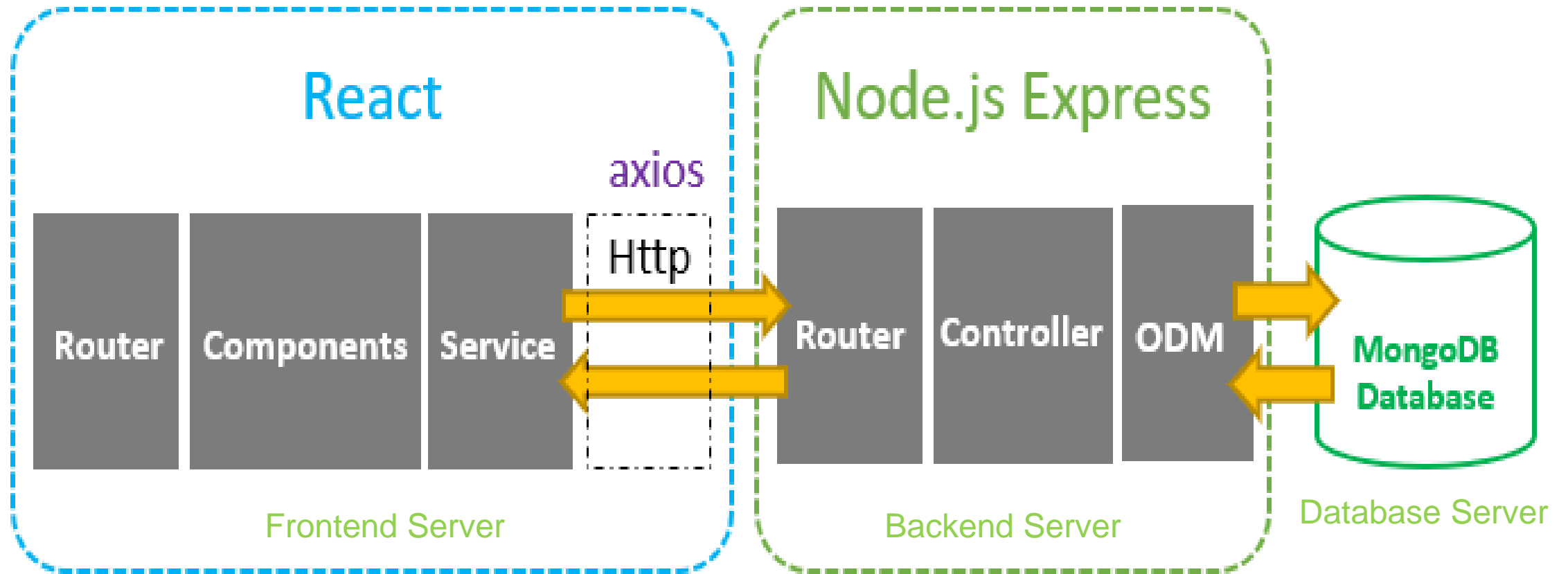
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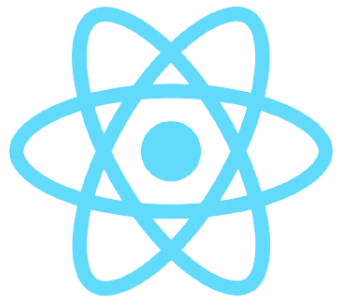
Objective:

- To digitize Examination.
- To Create an examination hall like environment online.
- To make malpractice free examination experience.
- Auto evaluation of the result.
- To keep students safely in the home during this COVID situation.

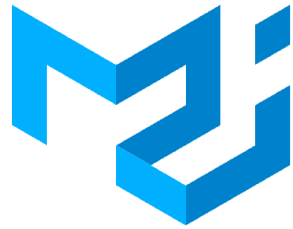
3-tier Architecture:



Frontend Server:



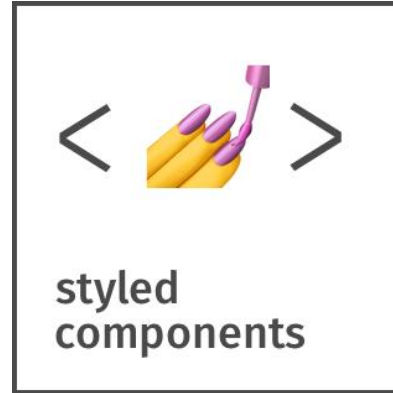
React JS



Material UI



Redux



Styled Components



Axios

Backend Server:



Express



mongoose

elegant mongodb object modeling for node.js

Database Server:



Version Control System:



git



Oexamination Demonstration (Frontend):

Oexamination

Sign In Sign Up

Sign Up

Sign Up

Sign-Up Page

Oexamination Demonstration (Frontend) Cont. :

Oexamination

Sign In Sign Up

Sign In

Email

Password

Sign In

Sign-In Page

Oexamination Demonstration (Frontend) Cont. :

Oexamination

HostExam

Welcome Naveen

Upcoming Examination

Exam 8

Starting: 20/07/2021 05:00 PM

Exam Live

Exam 6

Starting: 22/07/2021 02:55 PM

Edit

This is test exam 5

Hosted By: Naveen Mohanty

Starting: 22/07/2021 02:55 PM

Ending: 22/07/2021 03:55 PM

Exam 7

Starting: 22/07/2021 02:56 PM

Edit

Past Examination

Exam 5

Starting: 19/07/2021 02:45 PM

View Result

This Exa 5test

Hosted By: Naveen Mohanty

Starting: 19/07/2021 02:45 PM

Ending: 19/07/2021 03:16 PM

Exam 4

Starting: 19/07/2021 02:10 PM

View Result

Exam 3

Starting: 19/07/2021 01:50 PM

View Result

Exam 2

Starting: 19/07/2021 12:05 PM

View Result

Host Page

Oexamination Demonstration (Frontend) Cont. :

The screenshot displays the Oexamination frontend interface. At the top, there's a dark green header with the logo 'Oexamination' on the left, navigation tabs 'Host' and 'Exam' in the center, and a user greeting 'Welcome Naveen' on the right. Below the header, the main content area is divided into two sections: 'Upcoming Examination' on the left and 'Past Examination' on the right. The 'Upcoming Examination' section contains a table with three rows of exams (Exam 8, Exam 6, Exam 7) with their starting times. Exam 8 has an 'Exam Live' button. The 'Past Examination' section contains a table with five rows of exams (Exam 5 and four others with partial titles) with their starting times and 'View Result' buttons. A 'Create Exam' modal is open in the center, featuring a close button (X) in the top right. The modal has two input fields: 'Exam Title' and 'Exam Info'. To the right of these fields are two date-time pickers for 'Starting Time' and 'Ending Time', both with a calendar icon. A 'CREATE' button is located at the bottom right of the modal. The footer of the page is dark green and contains a circular logo on the left.

Upcoming Examination		Past Examination	
Exam 8	Starting: 20/07/2021 05:00 PM	Exam 5	Starting: 19/07/2021 02:45 PM
Exam 6	Starting: 22/07/2021 02:55 PM		Starting: 19/07/2021 02:10 PM
Exam 7	Starting: 22/07/2021 02:56 PM		Starting: 19/07/2021 01:50 PM
			Starting: 19/07/2021 12:05 PM
			Starting: 19/07/2021 11:30 AM

Create Exam Pop-Up

Oexamination Demonstration (Frontend) Cont. :

Oexamination

Welcome Naveen

←

Exam 6

This is test exam 5

Starting Time

22/07/2021, 14:55

Ending Time

22/07/2021, 15:55

Candidates

jateen@test.com

nirakar@test.com

Select Candidates

☒ jateen@test.com Jateen Mohanty

☐ urmila@test.com Urmila Mohanty

☒ nirakar@test.com Nirakar Mohanty

Delete Exam

Save Exam

Add Question

Question 1: what is your name?

Options:

1: Harry ✓

2: Marry

3: Welcome

4: Home

Mark: 2

Remove

Edit Exam Page

Oexamination Demonstration (Frontend) Cont. :

Oexamination

HostExam

Welcome Jateen

Upcoming Examination	Past Examination
<div><div>Exam 8</div><div>Starting: 20/07/2021 05:00 PM</div><div>Join</div><div>^</div></div> <div>This is exam 8 for test</div> <div>Hosted By: Naveen Mohanty</div> <div>Starting: 20/07/2021 05:00 PM</div> <div>Ending: 21/07/2021 05:00 PM</div>	<div><div>Exam 4</div><div>Starting: 19/07/2021 02:10 PM</div><div>View Result</div><div>▼</div></div> <div>Exam 3</div> <div>Starting: 19/07/2021 01:50 PM</div> <div>View Result</div> <div>▼</div> <div>Exam 2</div> <div>Starting: 19/07/2021 12:05 PM</div> <div>View Result</div> <div>▼</div>
<div><div>Exam 6</div><div>Starting: 22/07/2021 02:55 PM</div><div>Join</div><div>▼</div></div> <div>Exam 7</div> <div>Starting: 22/07/2021 02:56 PM</div> <div>Join</div> <div>▼</div>	<div><div>Exam 1</div><div>Starting: 19/07/2021 11:30 AM</div><div>View Result</div><div>^</div></div> <div>This exam 1 for test</div> <div>Hosted By: Naveen Mohanty</div> <div>Starting: 19/07/2021 11:30 AM</div> <div>Ending: 19/07/2021 11:35 AM</div>

Exam Page

Examination Demonstration (Frontend) Cont. :

Exam 8 This is exam 8 for test

Time Left
19:24:49

Submit & Exit

Mark: 2

Question 6 A train 240 m long passes a pole in 24 seconds. How long will it take to pass a platform 650 m long?

☐ 65 sec
☐ 89 sec
☐ 100 sec
☐ 150 sec

[< Previous](#) [Next >](#)

Progress Tracker

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18


19

20

Current Question

Attempted Question

Unattempted Question




Exam Session Page In Full-Screen

Oexamination Demonstration (Frontend) Cont. :

Oexamination


Welcome Naveen

Jateen Mohanty




Malpractice Time: 0 sec

Jateen Mohanty




Malpractice Time: 0 sec

Jateen Mohanty




Malpractice Time: 0 sec

Jateen Mohanty




Malpractice Time: 0 sec


Jateen Mohanty




Jateen Mohanty



Jateen Mohanty




Jateen Mohanty



Host surveillance page

Oexamination Demonstration (Frontend) Cont. :

OexaminationWelcome Nirakar



Exam Name: Exam 4

Candidate Name: Nirakar Mohanty

This is test exam 4

Start: 19/07/2021 02:10 PM**End:** 19/07/2021 02:15 PM**Mark:** 8/12

Question 1: '.TMP' extension refers usually to what kind of file?**Mark:** 0/4

1: Compressed Archive file

2: Image file ✗


3: Temporary file ✓

4: Audio file

Question 2: What do we call a collection of two or more computers that are located within a limited distance of each other and that are connected to each other directly or indirectly?**Mark:** 4/4

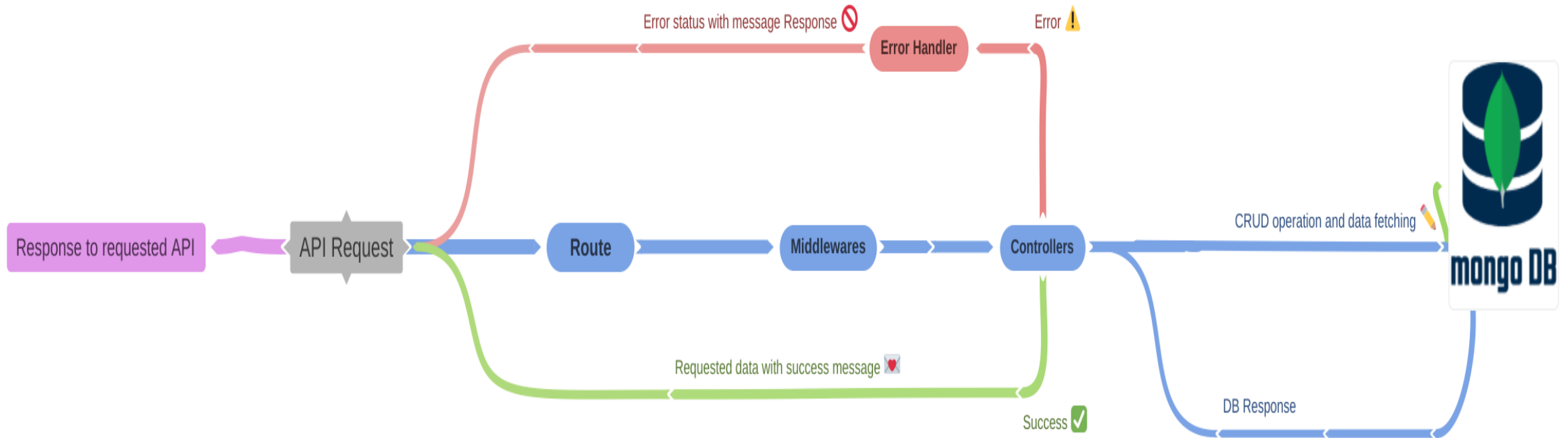
1: Internet

2: Intranet



Answer Page

Backend Working Diagram:



Backend Data Schema:

```
1 var mongoose = require("mongoose");
2 const crypto = require("crypto");
3 const { v4: uuidv4 } = require("uuid");
4 const { ObjectId } = mongoose.Schema;
5
6 var userSchema = new mongoose.Schema(
7   {
8     name: {
9       type: String,
10      required: true,
11      maxlength: 32,
12      trim: true,
13    },
14    email: {
15      type: String,
16      trim: true,
17      required: true,
18      unique: true,
19    },
20    userinfo: {
21      type: String,
22      trim: true,
23    },
24    encry_password: {
25      type: String,
26      required: true,
27    },
28    salt: String,
29    examhosted: [
30      {
31        examid: {
32          type: ObjectId,
33          ref: "Exam",
34        },
35      },
36    ],
37    upcomingexams: [
38      {
39        examid: {
40          type: ObjectId,
41          ref: "Exam",
42        },
43      },
44    ],
45    examattained: [
46      {
47        examid: {
48          type: ObjectId,
49          ref: "Exam",
50        },
51        answerid: { type: ObjectId, ref: "Answer" },
52      },
53    ],
54  },
55  { timestamps: true }
56 );
```

User Schema

```
1 const mongoose = require("mongoose");
2 const { ObjectId } = mongoose.Schema;
3
4 const ExamSchema = new mongoose.Schema(
5   {
6     examtitle: {
7       type: String,
8       required: true,
9       trim: true,
10    },
11    examinfo: {
12      type: String,
13      trim: true,
14    },
15    host: {
16      type: ObjectId,
17      ref: "User",
18      required: true,
19      trim: true,
20    },
21    questions: [
22      {
23        title: String,
24        options: [{ option: String, isanswer: Boolean }],
25        mark: Number,
26      },
27    ],
28    startingtime: {
29      type: String,
30      required: true,
31      trim: true,
32    },
33    endingtime: {
34      type: String,
35      required: true,
36      trim: true,
37    },
38    candidates: [{ id: { type: ObjectId, ref: "User" } }],
39  },
40  { timestamps: true }
41 );
42
43 module.exports = mongoose.model("Exam", ExamSchema);
44
```

Question Schema

```
1 const mongoose = require("mongoose");
2 const { ObjectId } = mongoose.Schema;
3 const Exam = require("./exam");
4
5 const answerSchema = new mongoose.Schema(
6   {
7     examid: {
8       type: ObjectId,
9       ref: "Exam",
10      required: "true",
11    },
12    candidateid: {
13      type: ObjectId,
14      ref: "User",
15      required: "true",
16    },
17    exited: {
18      type: String,
19      default: "",
20    },
21    answers: [
22      {
23        questionid: { type: ObjectId, ref: "Exam" },
24        optionid: { type: ObjectId, ref: "Exam" },
25        mark: Number,
26      },
27    ],
28    totalmark: { type: Number, default: 0 },
29  },
30  { timestamps: true }
31 );
32
33 module.exports = mongoose.model("Answer", answerSchema);
```

Answer Schema

Conclusion:

This project is the future of our examination system and also in this COVID situation, this website can become a great tool for Educational Institute and other Organizations.

Future Plane: Audio & Video Surveillance system will be introduced and various types questions can be added to the exam.

Thank You