

MAJOR-1 PROJECT

END TERM REPORT

For

CHIME: Let's connect

Submitted By

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End Term Report

1. Project Title

CHIME: Let's connect

2. Abstract

This project explores the innovative world of cloud-based interview scheduling tools, which play a pivotal role in revolutionizing the recruitment process. Leveraging cloud computing capabilities, organizations can seamlessly coordinate interviews, optimize scheduling efficiency, and enhance the overall candidate experience. Cloud-based interview scheduling tools are revolutionizing the recruitment process. These tools use cloud computing to coordinate interviews seamlessly, optimize scheduling efficiency, and enhance the candidate experience. One of the biggest advantages of cloud-based interview scheduling tools is that they allow organizations to easily coordinate interviews across different time zones and locations. This is essential in today's globalized economy, where many companies hire remote workers. Cloud-based interview schedulers also make it easy to track the status of interviews and ensure that they are scheduled in a timely manner.

In addition to improving efficiency, cloud-based interview scheduling tools also enhance the candidate experience. Applicants can easily select interview slots that align with their schedules, which can create a positive impression of the hiring organization. These tools can also be used to send automated reminders to candidates about upcoming interviews. While cloud-based interview scheduling tools offer many advantages, there are also some challenges to consider. One challenge is that these tools can be expensive to implement and maintain. Another challenge is that they can be difficult to integrate with existing HR systems. Despite these challenges, cloud-based interview scheduling tools offer several benefits that make them a valuable tool for any organization looking to improve its recruitment process.

3. Introduction

The advent of cloud technology has revolutionized various aspects of modern business operations, including the realm of human resources. This project delves into the innovative landscape of cloud-based interview schedulers, a crucial tool in streamlining the recruitment process. By harnessing the benefits of the cloud, organizations can seamlessly coordinate interviews, optimize scheduling efficiency, and enhance candidate experiences. The evolution of cloud technology has fundamentally reshaped the landscape of modern business operations. Among its many applications, cloud-based interview schedulers have emerged as a transformative solution in the realm of human resources.

The system architecture for "CHIME: Let's Connect" encompasses a well-structured frontend built with EJS to provide user-friendly interfaces for recruiters and applicants. The frontend facilitates interview slot management, invitation sending, and response tracking for recruiters. On the backend, Node.js and Express.js power a RESTful API that manages HTTP requests,

handles core application logic, and interfaces with the MongoDB database. The database is organized into collections for various data types, ensuring efficient querying and scheduling algorithms. For robust hosting and scalability, the system leverages cloud infrastructure using AWS, Google Cloud and MongoDB Atlas for cloud-based database management.

In summary, "CHIME: Let's Connect" adopts a modern system architecture that combines EJS for the frontend, Node.js and Express.js for the backend, and MongoDB for data storage. Cloud infrastructure choices enhance scalability and reliability, making it a well-rounded solution for efficient interview scheduling and management.

In an era marked by increased global connectivity and remote work, the ability to efficiently coordinate interviews across time zones and locations is paramount. Cloud-based interview schedulers offer organizations a dynamic platform to manage and streamline this intricate process. By centralizing scheduling, they eliminate the complexities of coordinating between multiple stakeholders, optimizing the recruitment pipeline's efficiency.

Moreover, these solutions enhance the candidate experience, offering flexibility and ease of use. Applicants can conveniently select interview slots that align with their schedules, fostering a positive impression of the hiring organization.

However, the implementation of cloud-based interview schedulers is not without its challenges.

4. Literature Review

This [1] web-based scheduling system leverages participants' schedules to recommend suitable timings, streamlining the process. Initiators extend invitations to participants, who can then respond after reviewing the meeting agenda. This innovative solution confers substantial benefits upon organizers, offering a remedy to common scheduling obstacles.

Numerous enterprises arrange meetings, leading to avoidable costs such as printing minutes on paper. To address this, MPL Perera and DU Vidanagama [2] introduced a paper-free meeting management system for Kotewala Defence University. This innovative system enables easy access to meeting information and provides navigation assistance to the meeting location.

Through deliberate selection of dates and venues for each meeting, the system [3] employs JavaScript, CSS, and MySQL for its functionality. The integration of the Meeting Management System within an organization holds the potential to enhance scheduling efficiency and resource allocation, leading to a more optimized timetable and resource allocation for meetings.

The scheduling of meetings in most meeting rooms or within a meeting room management system [4] follows a specific timetable. Nevertheless, occasional frustrations arise due to

unforeseen scheduling conflicts during meetings, as specific timings aren't always available. By integrating PIR sensor fusion devices and Ethernet connectivity, it becomes feasible to efficiently schedule meeting rooms, enhancing the utilization of these spaces and addressing such issues effectively.

5. Problem Statement

In today's fast-paced work environment, coordinating and managing daily meetings efficiently is a challenge that many individuals and teams face. The process of manually scheduling meetings, finding suitable time slots, and accommodating participants' availability can be time-consuming and error-prone. This often leads to missed meetings, overlapping schedules, and decreased productivity.

6. Objectives

- To distribute incoming tasks or jobs based on importance evenly across available resources to prevent resource bottleneck and also help users to get information according to the requirements.
- To generate instant notifications for real time communication with clientele.
- To deploy schedulers on the cloud to ensure high availability of applications and services by distributing tasks across multiple servers or instances.

7. Methodology

We will be creating a comprehensive system architecture for "CHIME: Let's Connect" will involve designing the overall structure of the application, including its components, databases, and the interaction between various elements. Additionally, determining the cloud infrastructure and technologies is essential for hosting and scaling the application.

System Architecture:

1. Frontend:

The user-friendly interfaces for both recruiters and applicants are a critical part of the system. Using EJS (Embedded JavaScript) for the front end, which is a good choice for generating dynamic HTML content. Here's how you can structure it:

Recruiter Interface: This interface is designed for recruiters to create, manage, and schedule interviews. It should include features like creating interview slots, sending invitations using mail, tracking candidate responses, and integrating Google Calendar for saving the dates.

2. Backend:

Using Node.js and Express.js for the backend. This is a robust choice for building a RESTful API to handle requests and manage the application's logic.

API Layer: This layer is responsible for handling HTTP requests from the frontend, processing data, and interacting with the database. It should include endpoints for creating, updating, and deleting interview slots, sending invitations, and handling applicant responses.

Business Logic: Implement the core business logic for scheduling interviews, avoiding time clashes, and sending notifications or reminders to both recruiters and applicants.

3. Database:

MongoDB Cloud is the database for storing user calendar data and other relevant information. Organize our data into collections for recruiters, applicants, interviews, and time slots. This ensures that data is structured efficiently to support querying and scheduling algorithms.

4. Cloud Infrastructure and Technologies:

Cloud Platform: We'll use a cloud platform like Amazon Web Services (AWS) and Google Cloud.

Server Hosting: We are going to Deploy our Node.js application on cloud platforms like Render and then create a development instance of AWS EC2 and use Docker and Jenkins(Continuous building tool) for checking if our application has errors or not .

Google Calendar API: This is used to mark the slots for the booked interview on the Google Calendar so that a person can keep track of their aligned interviews.

Database Hosting MongoDB Atlas is a cloud-based MongoDB service that integrates seamlessly with cloud platforms. It offers managed database clusters, automated backups, and high availability.

5. Devops

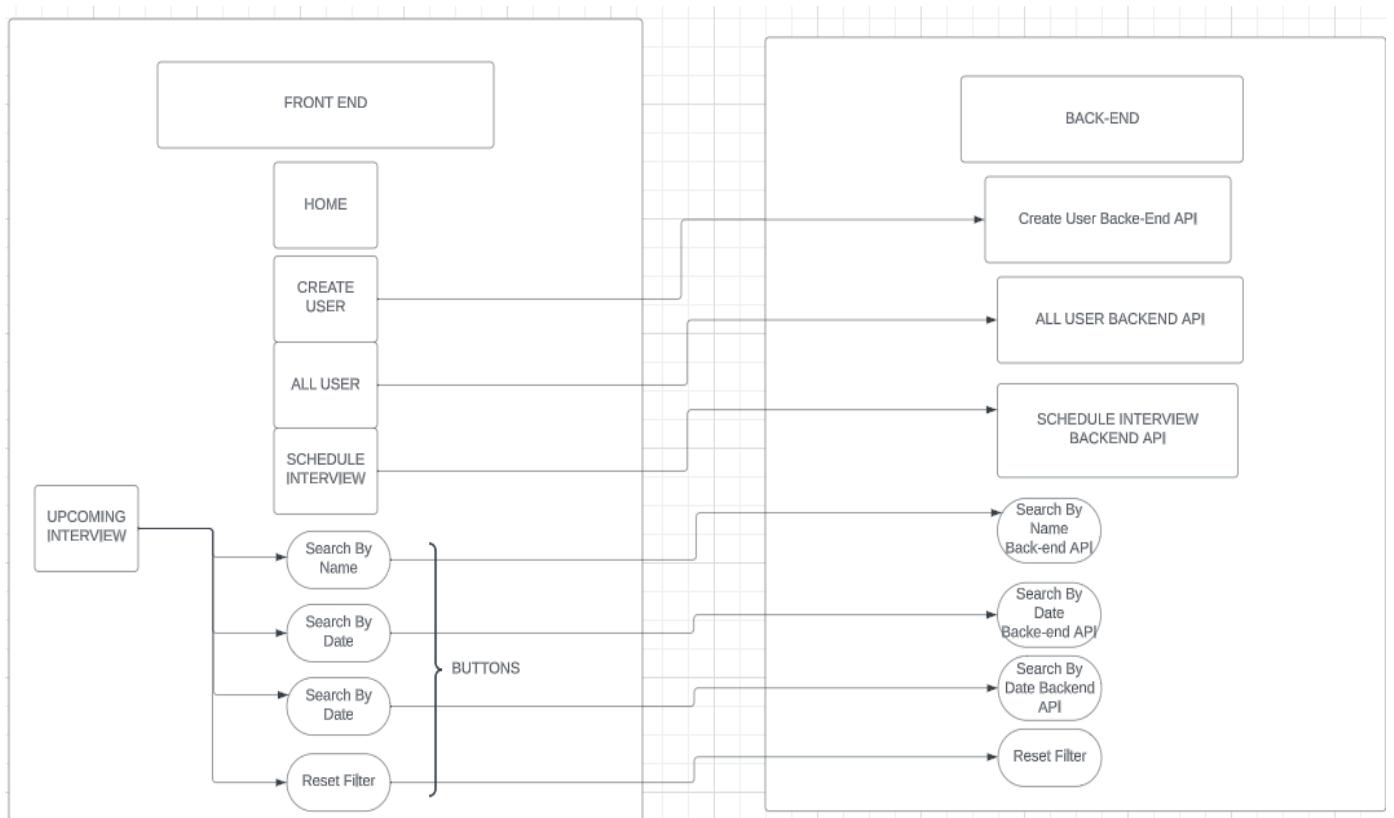
DevOps practices play a crucial role in ensuring the smooth integration, deployment, and continuous improvement of the CHIME application. Docker and Jenkins are fundamental tools in this process.

Docker: (Containerization and Orchestration)

Docker is employed to containerize the Node.js application and its dependencies. Containers provide consistency across development, testing, and production environments. Each component of the application, including the Node.js server, can run in a lightweight, isolated container, ensuring easy deployment and scalability. Docker allows for efficient resource utilization and helps mitigate the classic "it works on my machine" problem.

Jenkins Pipeline: (Continuous Integration and Continuous Deployment (CI/CD))

Jenkins plays a pivotal role in the Continuous Integration and Continuous Deployment (CI/CD) pipeline for the CHIME: Let's Connect application. By connecting to the version control system, such as GitHub, Jenkins automatically triggers the pipeline upon code changes. The process involves building Docker images and running tests to validate the codebase's integrity. Subsequently, the built Docker images are pushed to a container registry, enabling accessibility for deployment. Jenkins seamlessly orchestrates the deployment of the application to cloud platforms like AWS or Google Cloud, fostering automation and reducing the likelihood of errors. The CI/CD pipeline provides rapid feedback on code changes, expediting issue identification and resolution, while the automated deployment process facilitates easy scalability based on demand, ensuring a consistent and reliable deployment lifecycle.

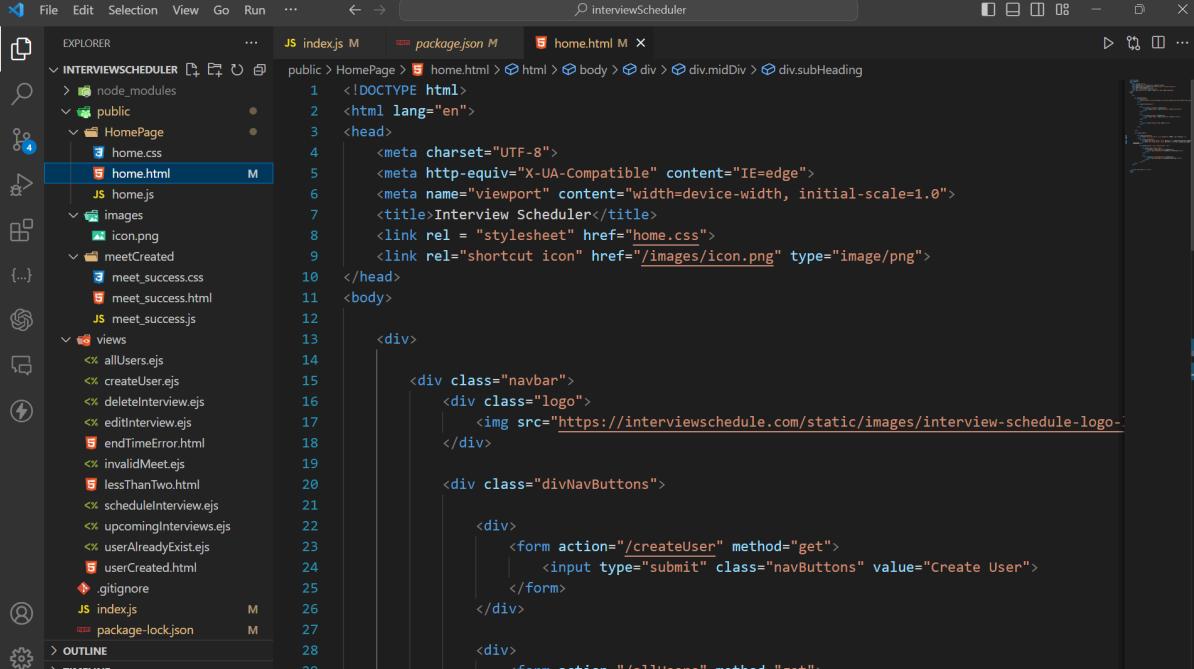


8. Implementation

[Github Link: https://github.com/Bhoomika121002/Interview_Scheduler](https://github.com/Bhoomika121002/Interview_Scheduler)

[Website Link: https://interviewscheduler-2szw.onrender.com/](https://interviewscheduler-2szw.onrender.com/)

Code:



The screenshot shows the Visual Studio Code interface with the following details:

- EXPLORER:** Shows the project structure:
 - INTERSCHEDULER
 - node_modules
 - public
 - HomePage
 - home.css
 - home.js
 - images
 - icon.png
 - meetCreated
 - meet_success.css
 - meet_success.html
 - meet_success.js
 - views
 - allUsers.ejs
 - createUser.ejs
 - deleteInterview.ejs
 - editInterview.ejs
 - endTimeError.html
 - invalidMeet.ejs
 - lessThanTwo.html
 - scheduleInterview.ejs
 - upcomingInterviews.ejs
 - userAlreadyExist.ejs
 - userCreated.html
 - .gitignore
 - index.js
 - package-lock.json
- Javascript Home Page:** The code for `home.html` is displayed in the main editor area:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Interview Scheduler</title>
    <link rel = "stylesheet" href="home.css">
    <link rel="shortcut icon" href="/images/icon.png" type="image/png">
</head>
<body>
    <div>
        <div class="navbar">
            <div class="logo">
                
            </div>
            <div class="divNavButtons">
                <div>
                    <form action="/createUser" method="get">
                        <input type="submit" class="navButtons" value="Create User">
                    </form>
                </div>
                <div>
                    <form action="/allUsers" method="get">

```



The screenshot shows a terminal window displaying the results of a MongoDB query. The output is a list of documents representing interview schedules:

```
[{"_id": new ObjectId("653e53cf45bc4f91e7026873"), "participants": ["Kashika Sharma", "Sia Ganju"], "interview_date": "2023-10-29", "startTime": "19:00", "endTime": "20:00"}, {"_id": new ObjectId("653e5ad33c0df01595e68a49"), "participants": ["SHIKHAR NAG", "Sia Ganju"], "interview_date": "2023-11-01", "startTime": "11:59", "endTime": "12:59"}, {"_id": new ObjectId("653e5bb1505af98b70eb1441"), "participants": ["Kashika Sharma", "Sia Ganju"], "interview_date": "2023-11-02", "startTime": "11:59", "endTime": "12:59"}, {"_id": new ObjectId("653e5ce71f602eba51d5ca6b"), "participants": ["Kashika Sharma", "Sia Ganju"], "interview_date": "2023-11-11", "startTime": "11:11", "endTime": "12:12"}, {"_id": new ObjectId("653e5e2cda14e6ab579d507d"), "participants": ["Kashika Sharma", "Sia Ganju"], "interview_date": "2023-11-12"}]
```

```

    }

let sendMail = (async (data, sub, message) => {
  participants = data.participants
  interview_date = data.interview_date
  startTime = data.startTime
  endTime = data.endTime

  const nodemailer = require('nodemailer')

  app.use(express.json());
  app.use(express.urlencoded({ extended: false }));
  const transporter = nodemailer.createTransport({
    service: "gmail",
    auth: {
      user: "nagshikharcareer@gmail.com",
      pass: "ruenjpyhwukvwpjm"//get this password from two step authentication of gmail.
    }
  });

  var mailList = []

  for (const participant of participants) {

    var result = await db.collection('busySlots').findOne({ name: participant })

    console.log(result)
  }
}

```

```

service: "gmail",
auth: {
  user: "nagshikharcareer@gmail.com",
  pass: "ruenjpyhwukvwpjm"//get this password from two step authentication of gmail.
};

var mailList = []

for (const participant of participants) {

  var result = await db.collection('busySlots').findOne({ name: participant })

  console.log(result)

  mailList.push(result.email)
}

console.log(mailList)

const options = {
  from: "nagshikharcareer@gmail.com",
  to: mailList,
  subject: sub,
  text: 'click the following link to join our Google Meet: ' + 'https://meet.google.com/tdr-raxa-mha',
};

transporter.sendMail(options, function (err, info) {
  if (err) {
    console.log(err)
    return;
  }
}

```

```

const options = {
  from: "nagshikharcareer@gmail.com",
  to: mailList,
  subject: sub,
  text: 'click the following link to join our Google Meet: ' + 'https://meet.google.com/tdr-raxa-mha',
};

transporter.sendMail(options, function (err, info) {
  if (err) {
    console.log(err)
    return;
  }
  console.log("Sent : " + info.response);
})

```

```

require('dotenv').config();
var express = require("express");
var bodyParser = require("body-parser");

const mongoose = require('mongoose');
const mongoDBUri = "mongodb://0.0.0.0:27017/interviewScheduler"; // Adjust with your link
mongoose.set('strictQuery', true);

mongoose.connect(mongoDBUri, { useNewUrlParser: true }, (err) => {
    if (!err) {
        console.log("MongoDB connected successfully.");
    } else {
        console.log("Error in DB connection : ", err);
    }
})
var db = mongoose.connection;
db.on('error', console.log.bind(console, "connection error"));
db.once('open', function (callback) {
    console.log("connection succeeded");
})

```

Google Calendar Integration:

New Project

You have 7 projects remaining in your quota. Request an increase or delete projects. [Learn more](#)

[MANAGE QUOTAS](#)

Project name * [?](#)

Project ID: calender-407312. It cannot be changed later. [EDIT](#)

Location * [BROWSE](#)

Parent organisation or folder

[CREATE](#) [CANCEL](#)

Showing results for *calender api*

No results found for *calender api*

2 results



Google Calendar API

Google Enterprise API [?](#)

With the Calendar API, you can display, create and modify calendar events as well as work with calendars or access controls.

Google Cloud Calender api X Search Filter

IAM and admin < Create service account

Service account details

Grant this service account access to the project (optional)

Grant users access to this service account (optional)

Service account users role [?](#)

Grant users the permissions to deploy jobs and VMs with this service account

Service account admins role [?](#)

chaudharybhoomika12@gmail.com – Bhoomika Chaudhary

[DONE](#) [CANCEL](#)

Create new calendar

Name
calender-int

Description

Time zone
(GMT+05:30) India Standard Time - Kolkata

Owner
Bhoomika Chaudhary

Create calendar

Share with specific people or groups

B Bhoomika Chaudhary
chaudharybhoomika12@gmail.com

Make changes and manage shar

Share with specific people

google-calender@calender-407312.iam.gserviceaccount.com

Add email or name

Permission

See all event details

Cancel Send

All-day event notifications

```

● PS C:\Users\hp\Downloads\interviewScheduler-main> npm install googleapis
added 26 packages, and audited 285 packages in 11s
32 packages are looking for funding
  12 vulnerabilities (7 moderate, 2 high, 3 critical)

To address all issues, run:
  npm audit fix

Run `npm audit` for details.
PS C:\Users\hp\Downloads\interviewScheduler-main> set GOOGLE_APPLICATION_CREDENTIALS=C:\Users\hp\Downloads\calender-407312-229586166dc1.json
PS C:\Users\hp\Downloads\interviewScheduler-main> nodemon app.js
[nodemon] 2.0.22
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): ***!
[nodemon] watching extensions: js,mjs,json
[nodemon] starting `node app.js`
Server is running on port 3001
Event created:
{
  kind: 'calendar#event',
  etag: '"3493789251878000"',
  id: 'rj26ql7mteqg42rq6h0vl16igk',
  status: 'confirmed',
  htmlLink: 'https://www.google.com/calendar/event?eid=cmoyNnFsN210ZXFnNDJycTzoMHZsMTZpZ2sgNlWYzMwM3MzMxMmM0Y2JkYmI0ZWY5Zjg0YzQ3MDYyZWQzMmA1Mjk0OTdjOGZjNzgyMTZhMmY5Nzk30Tc0YTMsYkBr',
  created: '2023-12-06T20:30:25.000Z',
  updated: '2023-12-06T20:30:25.939Z',
}

```

≡ **Calendar** Today < > December 2023

Create

December 2023

SUN	MON	TUE	WED
26	27	28	29
30	1	2	
3	4	5	6
10	11	12	13
17	18	19	20
24	25	26	27
31	1	2	3
4	5	6	

Search for people

My calendars

- Bhoomika Chaudhary
- Birthdays
- calender-int
- Tasks

10am Interview 8am Interview

```

const express = require('express');
const { google } = require('googleapis');

const app = express();
const port = 3001;

const SCOPES = 'https://www.googleapis.com/auth/calendar.readonly';
const GOOGLE_PRIVATE_KEY = "-----BEGIN PRIVATE KEY-----\nMIIEvQIBADANBgkqhkiG9w0BAQEFAASCBKcwgSjAgEAAoIBAQCyZdgyE\n-----END PRIVATE KEY-----";
const GOOGLE_CLIENT_EMAIL = "google-calender@calender-407312.iam.gserviceaccount.com"
const GOOGLE_PROJECT_NUMBER = "23792116215"
const GOOGLE_CALENDAR_ID = "5f31c73312c4cbdb4ef9f84c47062ed300529497c8fc78216a2f9797974a33b@group.calendar.google"

const jwtClient = new google.auth.JWT(
  GOOGLE_CLIENT_EMAIL,
  null,
  GOOGLE_PRIVATE_KEY,
  SCOPES
);

const calendar = google.calendar({
  version: 'v3',
  project: GOOGLE_PROJECT_NUMBER,
  auth: jwtClient
});

```

Dockerfile:

```

You, 13 hours ago | 1 author (You)
# Use an official Node.js runtime as a parent image
FROM node:14

# Set the working directory in the container
WORKDIR /home/index

# Copy package.json and package-lock.json to the working directory
COPY package*.json ./

# Install application dependencies
RUN npm install

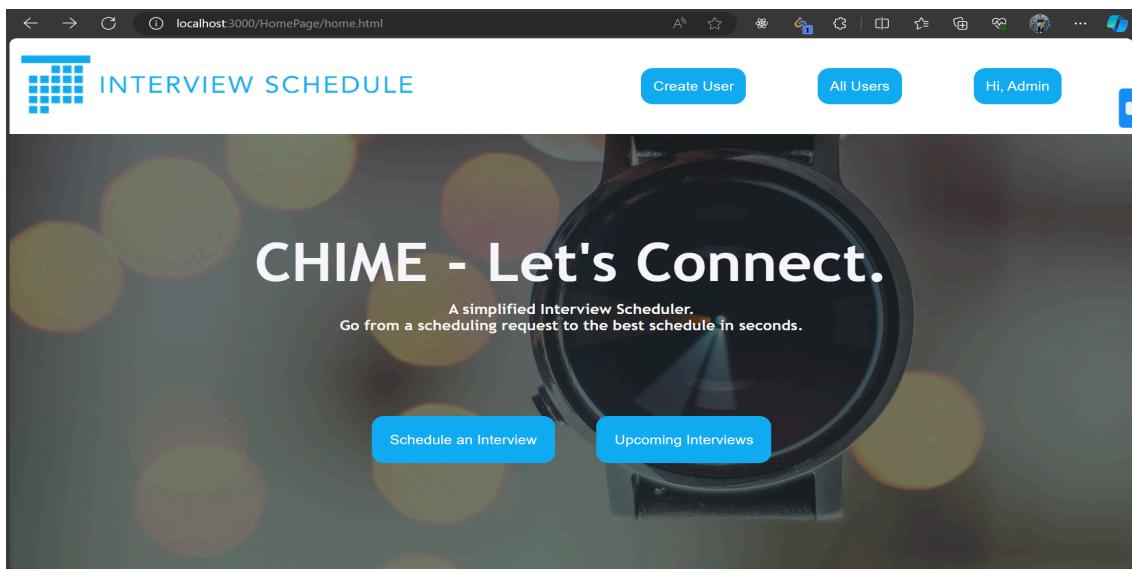
# Bundle app source
COPY . .

# Expose the port the app runs on
EXPOSE 3000

# Define the command to run your application
CMD ["node", "index.js"]

```

Output Screenshots:



Create User

Participant Name :

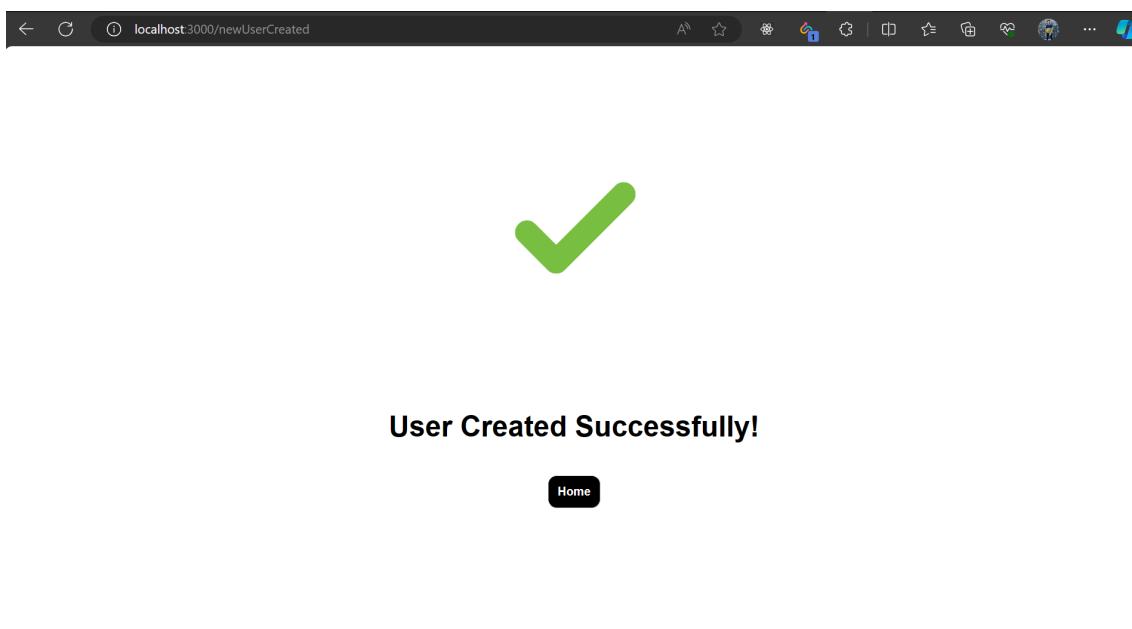
Busy Slots

Date :	10-10-2023
Start Time :	11:11
End Time:	12:11

[Add Another](#)

Email :

[Submit](#) [Home](#)



All Users

Home

USER - 1

Name : SHIKHAR NAG
Email : shikhnag24@gmail.com

[View Busy Slots](#)

USER - 2

Name : Kashika Sharma
Email : nagshikharcareer@gmail.com

[View Busy Slots](#)

USER - 3

Name : Sia Ganju
Email : 500086703@stu.upes.ac.in

[View Busy Slots](#)

USER - 4

Name : Mudit Nag

Update Interview

Participants :
 SHIKHAR NAG
 Sia Ganju

Date : 01-11-2023

Start Time : 11:59

End Time : 12:59

[Submit](#) [Go back!](#)

Schedule Interview

Participants :
 SHIKHAR NAG
 Mudit Nag

Date : 24-11-2025

Start Time : 11:11

End Time : 12:12

[Submit](#) [Home](#)



Interview Scheduled Successfully!

[Home](#)

 b.chaudhary12102@gmail.com

to me ▾ 01:21 (1 hour ago) ⚡ ⌂ ⋮

I hope you are doing well. I am writing to you regarding an interview opportunity at our company and would like to invite you for an interview to further discuss the details.

Interview Date: 7 Dec 2023, 01:21

Meeting Scheduled : 04:20 - 06:20

mailed-by: gmail.com

Signed by: gmail.com

security: Standard encryption (TLS) [Learn more](#)

Time: 04:20
►: Important according to Google magic.

Location: <https://meet.google.com/tdr-raxa-mha>

To confirm your attendance, please reply to this email.

We look forward to meeting with you and discussing your potential contributions to our team. Thank you for considering us as your potential employer.

Best regards,

RSVP:

[Yes](#) [No](#) // // //

Deployment

[EC2](#) > [Instances](#) > [Launch an instance](#)

Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags [Info](#)

Name: InterviewScheduler

Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

Summary

Number of instances: [Info](#) 1

Software Image (AMI): Amazon Linux 2023 AMI 2023.2.2... [read more](#) ami-0230bd60aa48260c6

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes)

Review commands

```

127.0.0.0/8
Live Restore Enabled: false

ubuntu@ip-172-31-20-144:~$ sudo systemctl status docker
● docker.service - Docker Application Container Engine
  Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
  Active: active (running) since Tue 2023-12-05 20:19:07 UTC; 7min ago
    TriggeredBy: ● docker.socket
      Docs: https://docs.docker.com
    Main PID: 3730 (dockerd)
      Tasks: 9
     Memory: 34.1M
        CPU: 359ms
       CGroup: /system.slice/docker.service
               └─3730 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Dec 05 20:19:06 ip-172-31-20-144 systemd[1]: Starting Docker Application Container Engine...
Dec 05 20:19:06 ip-172-31-20-144 dockerd[3730]: time="2023-12-05T20:19:06.999556249Z" level=info msg="Starting up"
Dec 05 20:19:07 ip-172-31-20-144 dockerd[3730]: time="2023-12-05T20:19:07.001324479Z" level=info msg="detected 127.0.0.53 nameserver, assuming it is the host's loopback interface"
Dec 05 20:19:07 ip-172-31-20-144 dockerd[3730]: time="2023-12-05T20:19:07.186747699Z" level=info msg="Loading containers: start."
Dec 05 20:19:07 ip-172-31-20-144 dockerd[3730]: time="2023-12-05T20:19:07.590626535Z" level=info msg="Loading containers: done."

```

```

ubuntu@ip-172-31-20-144:~$ java -version
openjdk version "11.0.21" 2023-10-17
OpenJDK Runtime Environment (build 11.0.21+9-post-Ubuntu-0ubuntu122.04)
OpenJDK 64-Bit Server VM (build 11.0.21+9-post-Ubuntu-0ubuntu122.04, mixed mode, sharing)
ubuntu@ip-172-31-20-144:~$ nano jenkins.sh
ubuntu@ip-172-31-20-144:~$ sh jenkins.sh
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 https://download.docker.com/linux/ubuntu bionic InRelease
Hit:5 http://security.ubuntu.com/ubuntu jammy-security InRelease

```

```

jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
     Active: active (running) since Tue 2023-12-05 20:40:08 UTC; 4min 59s ago
       PID: 21213 (java)
      Tasks: 39 (limit: 1121)
     Memory: 306.5M
        CPU: 39.484s
      CGroup: /system.slice/jenkins.service
              └─21213 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Dec 05 20:39:39 ip-172-31-20-144 jenkins[21213]: b777336b402d4fcf99f37a6a28f1f509
Dec 05 20:39:39 ip-172-31-20-144 jenkins[21213]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Dec 05 20:39:39 ip-172-31-20-144 jenkins[21213]: ****
Dec 05 20:39:39 ip-172-31-20-144 jenkins[21213]: ****
Dec 05 20:39:39 ip-172-31-20-144 jenkins[21213]: ****
Dec 05 20:40:08 ip-172-31-20-144 jenkins[21213]: 2023-12-05 20:40:08.505+0000 [id=32]           INFO    jenkins.InitReactorRunner$1#onAttained
Dec 05 20:40:08 ip-172-31-20-144 jenkins[21213]: 2023-12-05 20:40:08.532+0000 [id=24]           INFO    hudson.lifecycle.Lifecycle#onReady: Je
Dec 05 20:40:08 ip-172-31-20-144 systemd[1]: Started Jenkins Continuous Integration Server.
Dec 05 20:40:08 ip-172-31-20-144 jenkins[21213]: 2023-12-05 20:40:08.686+0000 [id=47]           INFO    h.m.DownloadService$Downloadable#load:
Dec 05 20:40:08 ip-172-31-20-144 jenkins[21213]: 2023-12-05 20:40:08.687+0000 [id=47]           INFO    hudson.util.Retriger#start: Performed t

```

Getting Started

Jenkins is ready!

Your Jenkins setup is complete.

[Start using Jenkins](#)

+ New Item Add description

People Build History Manage Jenkins My Views

Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

[Create a job](#) +

Build Queue ▼
No builds in the queue.

Build Executor Status ▼
1 Idle
2 Idle

Set up a distributed build

- [Set up an agent](#) 💻
- [Configure a cloud](#) ☁️
- [Learn more about distributed builds](#) ?

The Jenkins Plugins page shows the search bar with "github integration". A search result for "GitHub Integration 0.5.0" is displayed, with the "Install" button highlighted.

The Jenkins Configuration page for "Source Code Management" is shown. The "Git" tab is selected. The "Repositories" section contains a field for "Repository URL" with the value "https://github.com/Bhoomika121002/Interview_Scheduler.git", which has a validation error message: "Please enter Git repository.". The "Credentials" dropdown is set to "- none -".

The GitHub Webhooks configuration page is shown. The "Payload URL" is set to "http://3.88.159.229:8080/github-webhook/". The "Content type" is set to "application/x-www-form-urlencoded". The "Secret" field is empty. Under "Which events would you like to trigger this webhook?", the "Just the push event" radio button is selected. The "Active" checkbox is checked. The "Add webhook" button is visible at the bottom.

Webhooks

Add webhook

Webhooks allow external services to be notified when certain events happen. When the specified events happen, we'll send a POST request to each of the URLs you provide. Learn more in our [Webhooks Guide](#).

● http://3.88.159.229:8080/github-we... (push)	Edit	Delete
--	------	--------

```

ubuntu@ip-172-31-20-144:~$ cd ~/.ssh
ubuntu@ip-172-31-20-144:~/ssh$ ls
authorized_keys
ubuntu@ip-172-31-20-144:~/ssh$ ssh-keygen -o
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id_rsa
Your public key has been saved in /home/ubuntu/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:LTFOLQ82wc3Cs3HL/NSoQ75zdcc0b0dM08etkcd45g8 ubuntu@ip-172-31-20-144
The key's randomart image is:
+---[RSA 3072]---+
|       o.o      |
|       *o+     . |
|       OO.. o Bo |
|      +.O= o =+% |
|      Soo+ @=|= |
|      .+ . E O |

```

```

ubuntu@ip-172-31-20-144:~/ssh$ cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAADQABAAAABgQCgUnEBYr+04+eBiZhtOnUHojoyGEaTKCuTvCFIc64KEbRXHM/aWcu1NUyVQuT/dIr1lbsex2/NDG7/pctu9CRB7Kk+OrcA12o0
BUPwBEDxM4ISEe9cWfL5ddtEbT00vBajV9/LkXr4Ca7B4zunZktUFHn3zulbUhN1C+QvwuW4Yb+Qwxn1vOBg221QyHRZMHM19BQzhki+8Ucx73Vbp98bqc3i26AyJ2EQ2VFe0Rp
xJzcMQ96jE6wUf90MjWZ6r9nEKViHGr9wYzuazIlp9reQyWVaMAumCcHgbTC2PSSfZ53Jzhzh5TnWyh9UGvS913u6FPn04q/PcXNh7vQ3+5hjgfakfI9Ly2heQ1GL0q6VxVKVW
Iqh8LYahPL861CE9zb1ja2cmK62J04n0c/rh5EtMef2+HwMsCX8HAQ/WqJtn7qraLdZG0guN3r7ubfE48V+3NqzTIE2erThOLVccGXoJUnDCiQRgj5tuK4lE01RA+m10= ubuntu
72-31-20-144

```

SSH keys

[New SSH key](#)

This is a list of SSH keys associated with your account. Remove any keys that you do not recognize.

Authentication Keys

 projectsshkey SSH SHA256:ydT0/59FwK8PZkK/oA61LLG04V7iwBDtBuxyHwFXkcs Added on Jun 16, 2023 Never used — Read/write	Delete
 projectIntersshkey SSH SHA256:LTFOLQ82wc3Cs3HL/NSoQ75zdcc0b0dM08etkcd45g8 Added on Dec 6, 2023 Never used — Read/write	Delete

Check out our guide to [generating SSH keys](#) or troubleshoot [common SSH problems](#).

Dashboard > Manage Jenkins > Credentials > System > Global credentials (unrestricted) >

Kind

Username with password

Scope ?

Global (Jenkins, nodes, items, all child items, etc)

Username ?

Bhoomika121002

Treat username as secret ?

Password ?

.....

ID ?

public_id

[Create](#)

Global credentials (unrestricted)[+ Add Credentials](#)

Credentials that should be available irrespective of domain specification to requirements matching.

ID	Name	Kind	Description
 ssh-id	Bhoomika121002/***** (connecting github with jenkins)	Username with password	connecting github with jenkins

Icon: S M L

 With Ant ?**Configure** General Source Code Management Build Triggers Build Environment Build Steps Post-build Actions**Build Steps** Execute shell ?

Command

See [the list of available environment variables](#)

```
docker build -t Interview-Scheduler .
docker run --name web-dev -d -it -p 80:80 Interview-Scheduler
```

Advanced ▾

[Save](#)[Apply](#) Do not allow the pipeline to resume if the controller restarts**Configure** General Advanced Project Options Pipeline GitHub project

Project url ?

Advanced ▾

 Pipeline speed/durability override ? Preserve stashes from completed builds ? This project is parameterized ? Throttle builds ?**Build Triggers**[Save](#)[Apply](#)

Dashboard > Interview-scheduler-pp > Configuration

Definition Pipeline script

Configure

- General
- Advanced Project Options
- Pipeline**

```

1 pipeline {
2   agent any
3   stages {
4     stage('Code') {
5       steps {
6         git url: "https://github.com/Bhoomika121002/Interview_Scheduler.git", branch:'main'
7       }
8     }
9     stage('Build and Test') {
10    steps {
11      sh 'docker build -t interview-scheduler .'
12      echo "build and test completed"
13    }
14  }
15  stage('Run') {
16    steps {
17      sh "docker run --name web-dev -d -it -p 80:80 interview-scheduler"
18    }
19  }
20 }
21 }
22 }
```

try sample Pipeline... ▾

Save **Apply**

Dashboard > project-Interview > #3 > Console Output

Console Output

- Status
- </> Changes
- Console Output**
- View as plain text
- Edit Build Information
- Delete build '#3'
- Polling Log
- Git Build Data
- ← Previous Build

```

Started by GitHub push by Bhoomika121002
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/project-Interview
The recommended git tool is: NONE
using credential ssh-id
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/project-Interview/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/Bhoomika121002/Interview_Scheduler.git # timeout=10
Fetching upstream changes from https://github.com/Bhoomika121002/Interview_Scheduler.git
> git --version # timeout=10
> git --version # 'git version 2.34.1'
using GIT_ASKPASS to set credentials connecting github with jenkins
> git fetch --tags --force --progress -- https://github.com/Bhoomika121002/Interview_Scheduler.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 745ecd872e6c95f34353b257f5b1dd8513c18870 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 745ecd872e6c95f34353b257f5b1dd8513c18870 # timeout=10

```

```

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL

# Members of the admin group may gain root privileges
%admin  ALL=(ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "@include" directives:

@include /etc/sudoers.d
ubuntu@172-31-20-144 ubuntu ALL=(ALL) NOPASSWD: ALL

```

Help **Write Out** **Where Is** **Cut** **Exit**
Exit **Read File** **Replace** **Paste** **Join**

Dashboard > Interview-scheduler-pp >

Status ✗ Interview-scheduler-pp

- </> Changes
- ▷ Build Now
- ⚙ Configure
- trash Delete Pipeline
- 🔍 Full Stage View
- GitHub
- Rename
- Pipeline Syntax

Stage View

	Code	Build and Test	Run
Average stage times: (Average full run time: ~5s)	621ms	787ms	375ms
Dec 06 15:15 No Changes	609ms	1s	2s

Dashboard >

+ New Item Add description

People All +

- Build History
- Project Relationship
- Check File Fingerprint
- Manage Jenkins
- My Views

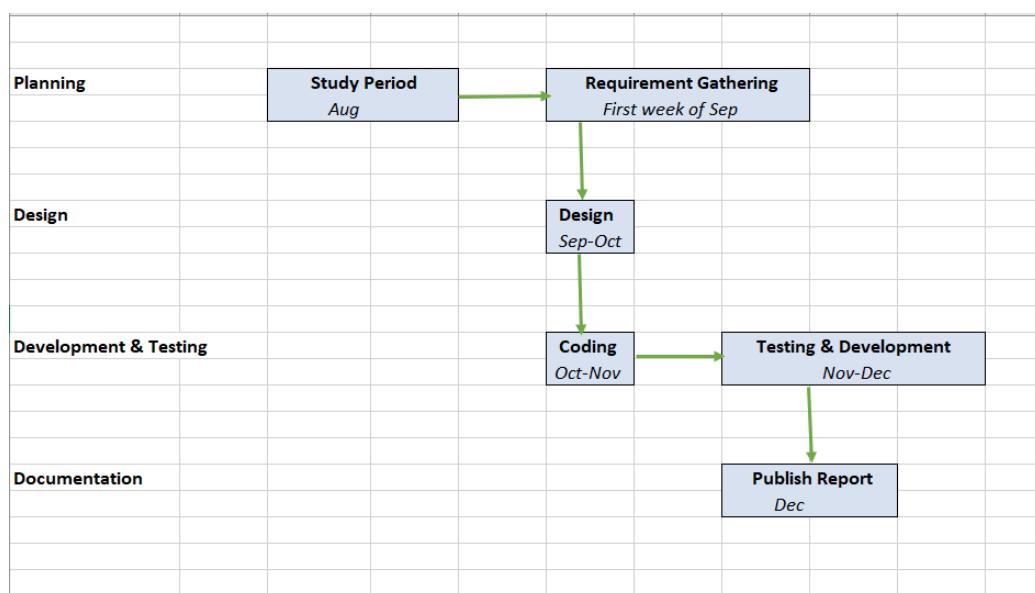
S	W	Name	Last Success	Last Failure	Last Duration
✓	cloud	Interview-scheduler-pp	7 min 33 sec #17	9 min 18 sec #16	5.5 sec
✓	cloud	project-Interview	11 hr #3	11 hr #2	1 hr 45 min

Icon: S M L Icon legend Atom feed for all Atom feed for failures Atom feed for just latest builds

Build Queue No builds in the queue.

Build Executor Status ▼

9. Pert Chart



10. Conclusion

- In this project, we will design and develop an application for interview scheduling.
- Users will have access to this application in order to view their assigned slots for the interview.
- It will be simpler for people to obtain the required details concerning their interview.
- It will save a lot of time, effort, and money as well as a large amount of paperwork for the interviewer as well as the learner.

Technological advancements have caught up with most industries and the smaller tasks they conduct. The scheduling and management of interviews is no exception.

Proven online scheduling software is now readily available to all-sized organizations and for all scheduling needs, regardless of the scope of the job, the number of staff members, and their budgets. This technology can transform the daunting process of scheduling and enable them to run more efficiently and profitably.

11. References

1. Thalawattha, Sathsara & Vidanagama, Dushyanthi. (2021). A Survey on Web-based Meeting Scheduling Application.
2. Perera, Poornima & Vidanagama, Dushyanthi. (2020). A WEB-BASED PAPERLESS MEETING MANAGEMENT SYSTEM.
3. Erik Timmerman, C., Shik Choi, C., 2017. Meeting Technologies. <https://doi.org/10.1002/9781118955567.wbieoc132>
4. Tran, Linh & Stojcevski, Alex & Pham, Thanh & Souza-Daw, Tony & Nguyen, Nhan & Nguyen, Vinh & Nguyen, Chau. (2016). A smart meeting room scheduling and management system with utilization control and ad-hoc support based on real-time occupancy detection. 186-191. 10.1109/CCE.2016.7562634.