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Department of Computer Engineering

CSL605 SKILL BASED LAB COURSE: CLOUD COMPUTING

Mini Project Report

- **Title of Project** : **APSIT BIRTHDAY CALENDAR**
- **Year and Semester** : **T.E. (Sem VI)**
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Chapter 1

Abstract

APSIT Birthday Calendar website is a platform designed to help our students keep track of the birthdays of their friends. This website serves as an online database of birthdays, providing users with a reliable and convenient way to never forget a birthday again.

The website's homepage will have a clean and simple design that is easy to navigate, with a prominent list of upcoming birthdays.

The website will be accessible on both desktop and mobile devices, with a responsive design that adapts to different screen sizes.

Overall, this birthday calendar website aims to simplify the process of remembering and celebrating the important birthdays of the people in our lives. By offering a user-friendly platform that consists of a calendar, this website will become an essential tool for anyone who wants to stay connected and show their loved ones how much they care.

Chapter 2

Introduction

Our platform is more than just a simple reminder service. It's an all-in-one solution for keeping track of the important birthdays of your friends and family. Our user-friendly interface makes it easy to navigate and find the information you need quickly.

On our homepage, you'll find a comprehensive list of upcoming birthdays, including the name and date of each person's birthday. This allows you to plan ahead and ensure that you have the perfect gift or card ready in time.

In addition to the list of upcoming birthdays, we also highlight users who are celebrating their birthdays today. This feature allows you to send them a personalized birthday message or post a birthday greeting on their social media, making their day even more special.

Our website is accessible on both desktop and mobile devices, so you can stay on top of your birthday reminders no matter where you are.

In summary, our birthday calendar website is designed to simplify the process of remembering and celebrating the important birthdays of the people in our lives. We hope that our platform will make it easier for you to stay connected and show your loved ones how much you care. So go ahead and try our platform, and never miss a birthday again!

Chapter 3

Problem Definition

The problem our birthday calendar website aims to solve is the challenge of remembering and keeping track of the birthdays of our friends and classmates. With our busy schedules and numerous responsibilities, it can be easy to forget an important birthday, leading to hurt feelings and missed opportunities to celebrate with our loved ones.

Additionally, we may miss out on opportunities to connect with our loved ones on their special day, either because we forgot or because we didn't know about their birthday in the first place.

Our birthday calendar website aims to solve these problems by providing a simple and convenient platform for users to keep track of all the important birthdays in their lives.

Chapter 4

Objective and Scope

Objectives:

- To help users keep track of the important birthdays of their friends, family members, and loved ones, and never forget a birthday again.
- To improve the quality of birthday celebrations by ensuring that users are well-informed about upcoming birthdays and have adequate time to plan, buy gifts, and send greetings.
- To establish our platform as a reliable and trustworthy source of birthday information, by ensuring the accuracy and completeness of our calendar, and by protecting user data and privacy.

Scope:

Here are some of the benefits and opportunities of building a website on the cloud:

- **Scalability:** One of the primary benefits of cloud computing is the ability to scale your website resources up or down as needed. This means that you can easily accommodate spikes in traffic or changes in demand without having to worry about server capacity.
- **Reliability:** Cloud hosting providers typically offer high levels of uptime and reliability, thanks to the redundancy built into their infrastructure. This means that your website will be available to visitors more often, with less downtime and fewer interruptions.
- **Flexibility:** With cloud hosting, you have more control over your website environment, including the ability to choose your operating system, web server, and software stack. This allows you to tailor your website to your specific needs and preferences.
- **Security:** Cloud hosting providers typically offer robust security features to protect your website from cyber-attacks, including firewalls, intrusion detection systems, and DDoS mitigation.

Chapter 5

Description

Cloud Services used in this project are as follows:

- Azure web service

Azure Web Services is a cloud-based platform offered by Microsoft that allows developers and businesses to build, deploy, and manage websites and web applications. It provides a range of tools and services to help developers create robust, scalable, and secure web solutions.

- Next js SSR App

SSR or Server-Side Rendering is also known as dynamic rendering. In SSR the page is generated each time the server gets a request. Pages on which the data have to change for a particular type of request, those pages use SSR as data is not the same for every request and may vary with it.

- Amazon EC2

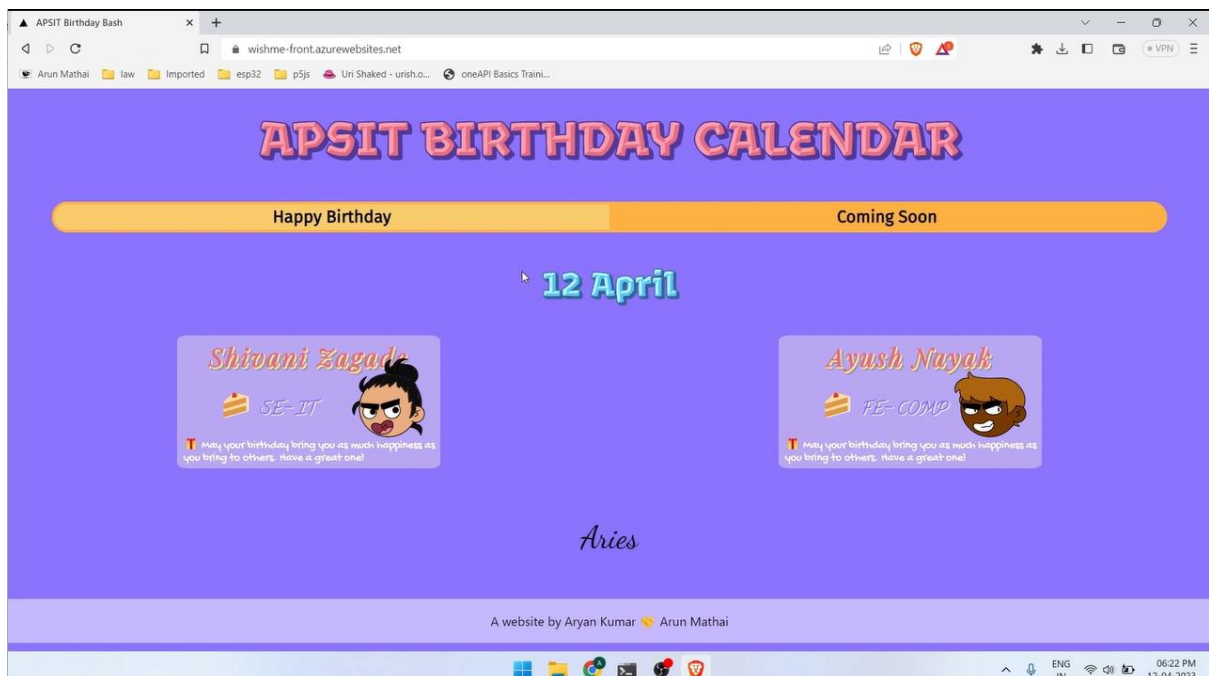
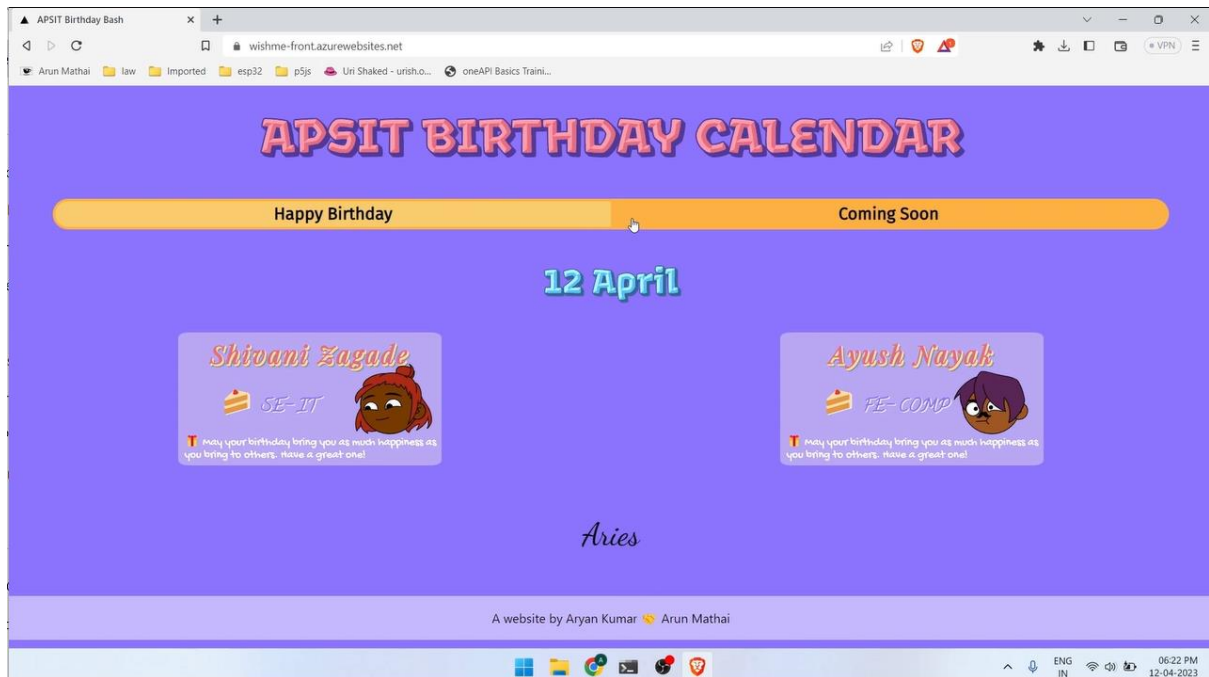
Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It is designed to make web-scale cloud computing easier for developers.

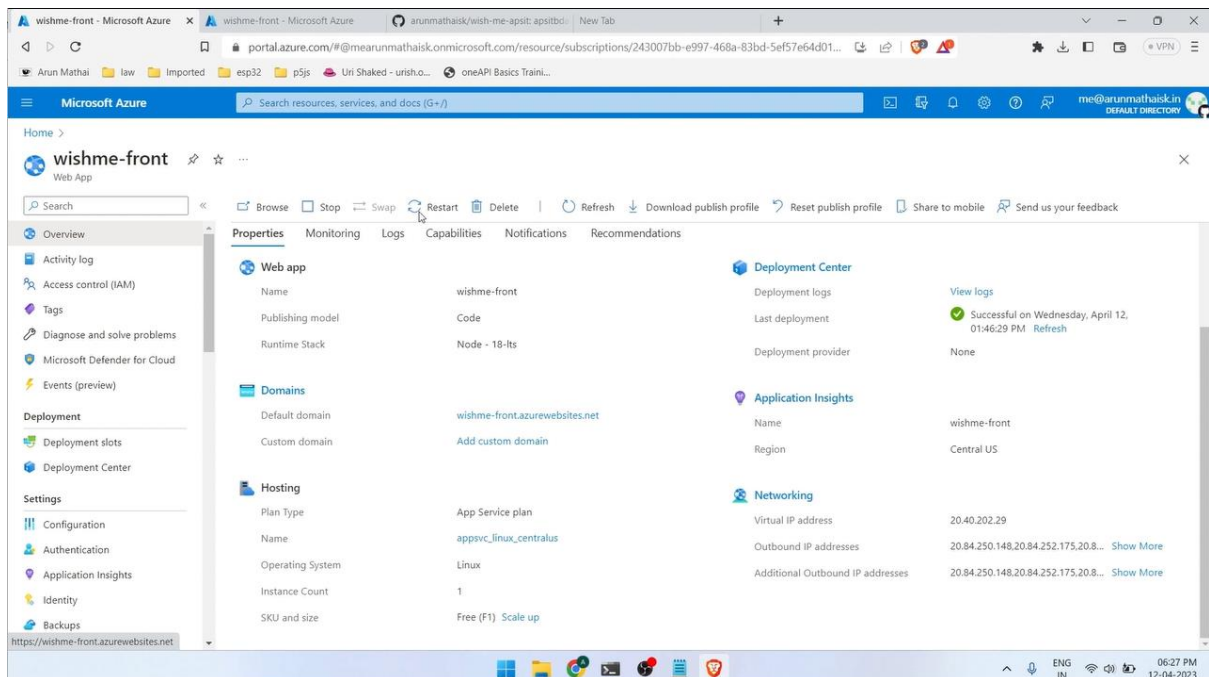
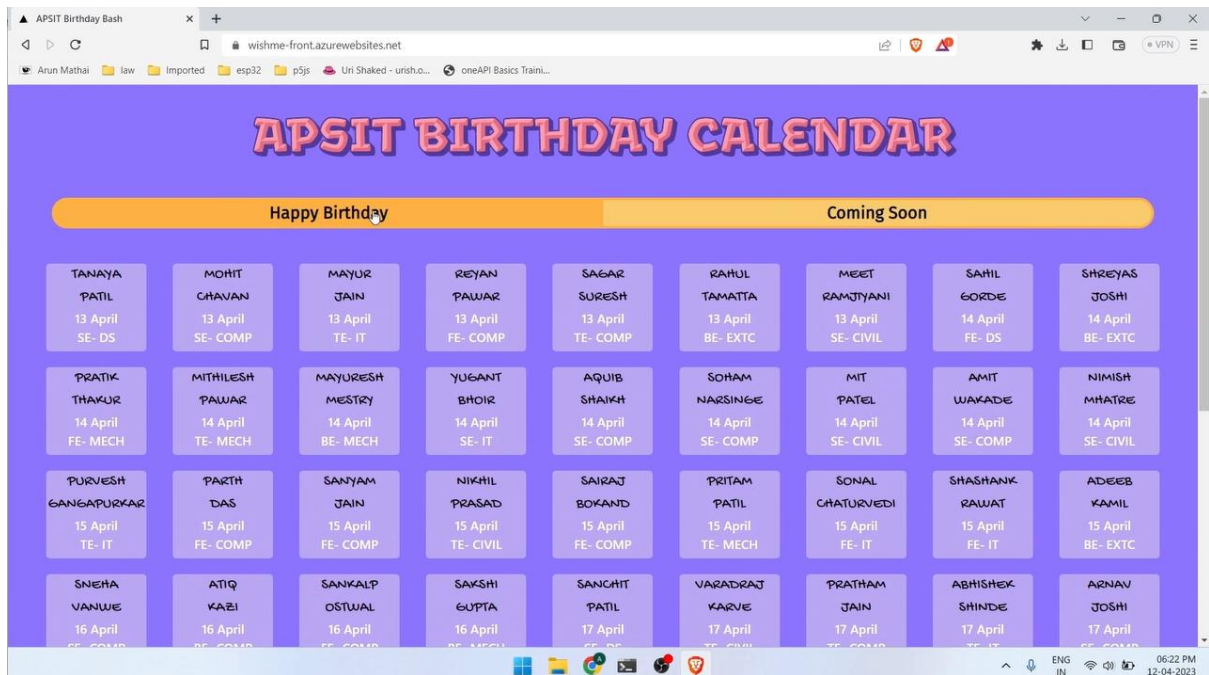
- Azure managed services PostgreSQL database

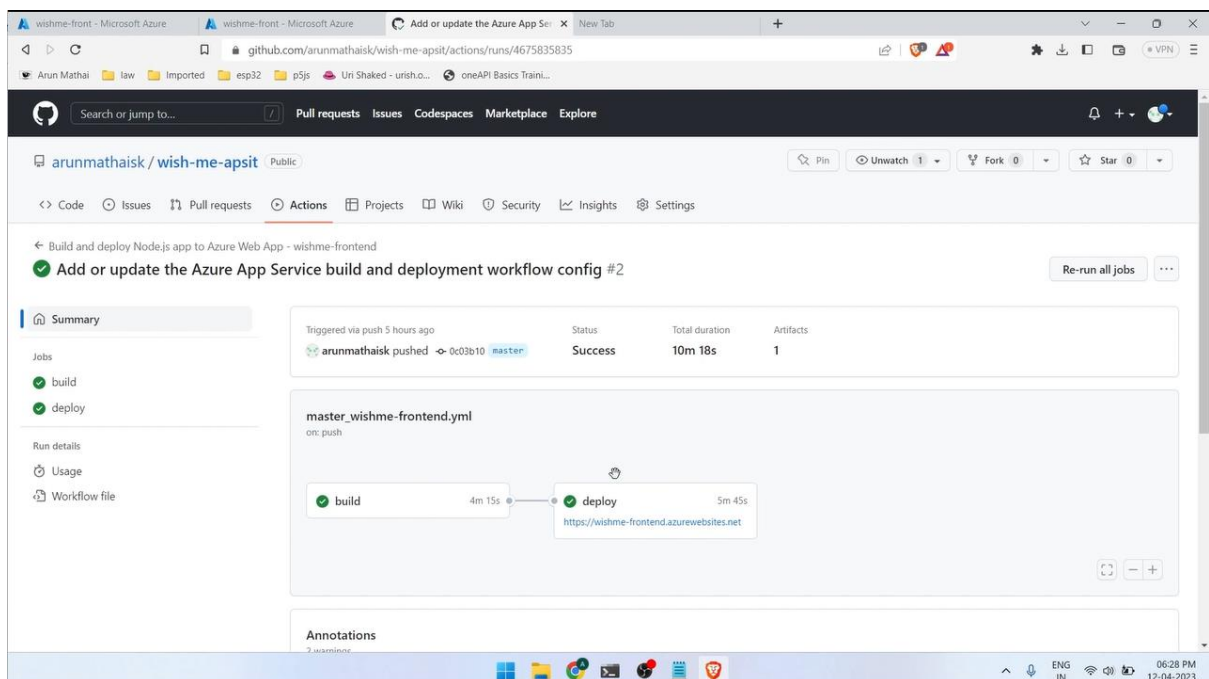
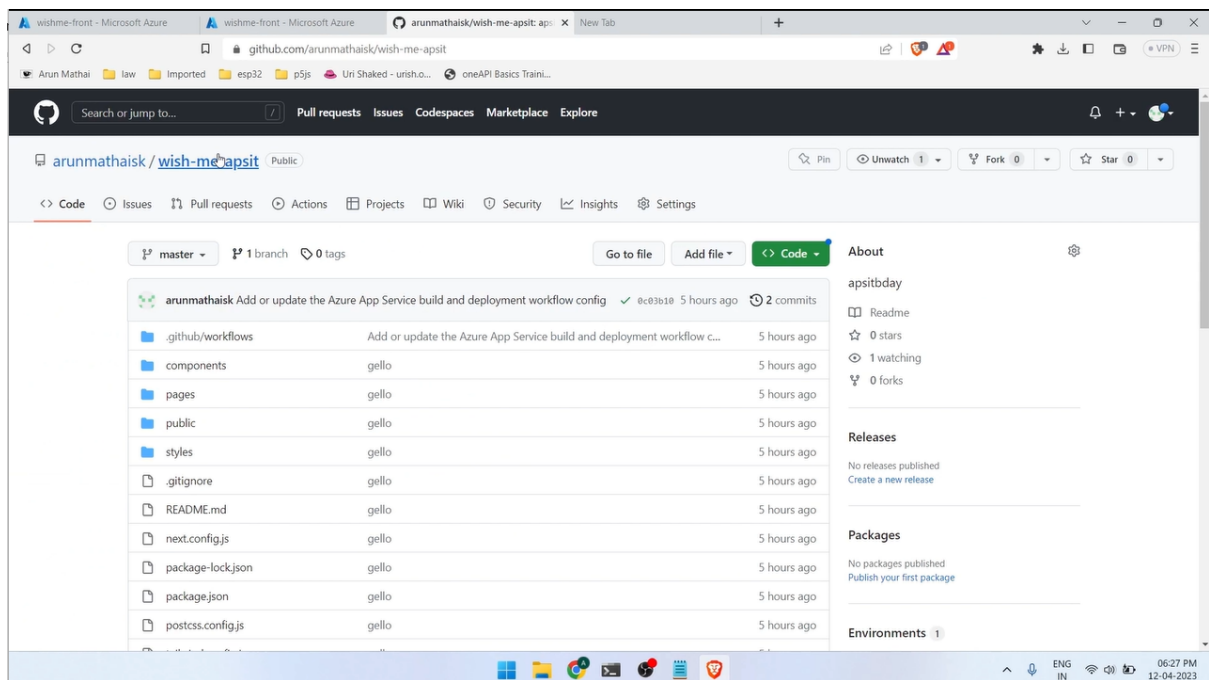
Azure Database for PostgreSQL is a relational database service based on the open-source Postgres database engine. It's a fully managed database-as-a-service that can handle mission-critical workloads with predictable performance, security, high availability, and dynamic scalability.

Chapter 6

Implementation







Chapter 7

Learning Outcome

The cloud mini project called Apsit Birthday Calendar, which is a birthday reminder website uploaded on Azure Cloud using Azure web service, Next.js SSR App, Amazon EC2, and Azure managed services PostgreSQL database, provides a unique opportunity to learn about cloud-based application deployment and management.

- Understanding the fundamentals of cloud computing and how Azure Web Services can be used to build, deploy, and manage web applications on the cloud.
- Learning how to use Next.js SSR App to build server-rendered React applications that are optimized for SEO and performance.
- Exploring Amazon EC2 and how it can be used to deploy and manage virtual machines on the cloud.
- Learning about Azure managed services PostgreSQL database and how it can be used to build scalable, secure, and highly available databases on the cloud.
- Understanding how to integrate these technologies to build a complete web application stack on the cloud, including frontend, backend, and database components.
- Learning how to use DevOps tools such as Azure DevOps to automate the deployment and management of your web application on the cloud.
- Developing skills in monitoring and troubleshooting cloud-based applications using tools such as Azure Application Insights and Amazon CloudWatch.