ICT 171 Assignment 2: Cloud Project & Video Explainer

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Domain Name: http://foodblogtoday.com

Project Overview

This project demonstrates how to deploy a basic website on an Amazon EC2 instance as a practical implementation of ICT171 Infrastructure as a Service (IaaS). The server uses the Ubuntu operating system and is configured with the LAMP technology stack: Apache for website hosting, MySQL for database management, and PHP for server-side scripting. The website, called Food Blog Today, aims to develop into a platform for sharing simple recipes and food ideas. Currently, the website displays static HTML content along with necessary metadata such as student ID and project information. The domain name (foodblogtoday.com) has been registered and configured with AWS Route 53, and SSL encryption has been enabled using Let's Encrypt and Certbot to ensure secure HTTPS access. The server is protected by basic firewall rules (UFW) and can be accessed remotely via SSH. Through this project, I learned how to configure and provision cloud-based virtual machines, install and maintain necessary web server software, and perform basic security hardening. This project also solidified my understanding of the Linux command line environment, system package management, and the basics of scalable, internet-accessible application infrastructure. This project laid the foundation for future developments, such as implementing dynamic user input, storing and retrieving content in a database, and ultimately deploying a fully functional blogging application in a secure and scalable cloud environment.

The site is accessible at: **http://foodblogtoday.com**

Technology Stack

- Infrastructure: Amazon EC2 (t2.micro)
- OS: Ubuntu 22.04
- Web Server: Apache 2
- Database: MySQL 8
- Backend Language: PHP
- Frontend: HTML/CSS
- Domain Name & DNS: AWS Route 53
- Security: HTTPS enabled via Let's Encrypt

Server Setup Instructions

1. Provision EC2 Instance

- Launch Ubuntu 22.04 instance in AWS EC2
- Open ports 22 (SSH), 80 (HTTP), 443 (HTTPS)

2. Install LAMP Stack

sudo apt update

sudo apt install apache2 mysql-server php libapache2-mod-php php-mysql

3. Configure Domain Name and SSL

sudo apt install certbot python3-certbot-apache

sudo certbot --apache

4. Upload Website Content

cd /var/www/html

sudo nano index.html (add initial project proposal info)

sudo nano form.html (for comment form)

sudo nano submit.php (to handle comment submissions)

sudo nano view.php (to view all comments)

5. Set Up MySQL

```
CREATE DATABASE foodblog;

USE foodblog;

CREATE TABLE comments (

  id INT AUTO_INCREMENT PRIMARY KEY,

  name VARCHAR(100),

  message TEXT,

  created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP

);
```

6. Commenting System

- form.html includes a form for user input
- submit.php processes form data and inserts it into the database
- view.php fetches and displays the comments

7. Backup Script

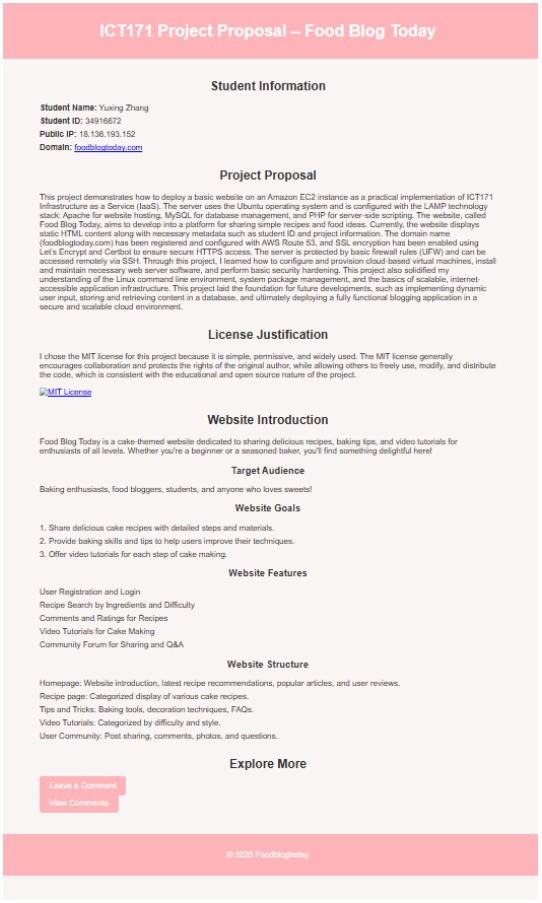
```
#!/bin/bash

DB_NAME="foodblog"

DB_USER="root"

DB_PASS="zyx@ZY19960323"

BACKUP_DIR="/var/backups"

DATE=$(date +%Y%m%d_%H%M%S)

FILE_NAME="${DB_NAME}_${DATE}.sql"

echo "Starting database backup..."

sudo mysqldump -u $DB_USER -p$DB_PASS $DB_NAME >
$BACKUP_DIR/$FILE_NAME

if [ $? -eq 0 ]; then

  echo "✅ Backup completed successfully! File location:
$BACKUP_DIR/$FILE_NAME"

else

  echo "❌ Backup failed! Please check for errors."

fi
```

GitHub Repository

https://github.com/KrisZhangxx/foodblogtoday

- Includes all files: index.html, form.html, submit.php, view.php, backup.sh
- Includes screenshots: index.png, comment.png, view.png
- Includes README.md with full documentation and project overview

Screenshots



ICT171 Project Proposal – Food Blog Today

Student Information

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Project Proposal

This project demonstrates how to deploy a basic website on an Amazon EC2 instance as a practical implementation of ICT171 Infrastructure as a Service (IaaS). The server uses the Ubuntu operating system and is configured with the LAMP technology stack: Apache for website hosting, MySQL for database management, and PHP for server-side scripting. The website, called Food Blog Today, aims to develop into a platform for sharing simple recipes and food ideas. Currently, the website displays static HTML content along with necessary metadata such as student ID and project information. The domain name (foodblogtoday.com) has been registered and configured with AWS Route 53, and SSL encryption has been enabled using Let's Encrypt and Certbot to ensure secure HTTPS access. The server is protected by basic firewall rules (UFW) and can be accessed remotely via SSH. Through this project, I learned how to configure and provision cloud-based virtual machines, install and maintain necessary web server software, and perform basic security hardening. This project also solidified my understanding of the Linux command line environment, system package management, and the basics of scalable, internet-accessible application infrastructure. This project laid the foundation for future developments, such as implementing dynamic user input, storing and retrieving content in a database, and ultimately deploying a fully functional blogging application in a secure and scalable cloud environment.

License Justification

I chose the MIT license for this project because it is simple, permissive, and widely used. The MIT license generally encourages collaboration and protects the rights of the original author, while allowing others to freely use, modify, and distribute the code, which is consistent with the educational and open source nature of the project.

MIT License

Website Introduction

Food Blog Today is a cake-themed website dedicated to sharing delicious recipes, baking tips, and video tutorials for enthusiasts of all levels. Whether you're a beginner or a seasoned baker, you'll find something delightful here!

Target Audience

Baking enthusiasts, food bloggers, students, and anyone who loves sweets!

Website Goals

1. Share delicious cake recipes with detailed steps and materials.
2. Provide baking skills and tips to help users improve their techniques.
3. Offer video tutorials for each step of cake making.

Website Features

User Registration and Login
Recipe Search by Ingredients and Difficulty
Comments and Ratings for Recipes
Video Tutorials for Cake Making
Community Forum for Sharing and Q&A

Website Structure

Homepage: Website introduction, latest recipe recommendations, popular articles, and user reviews.
Recipe page: Categorized display of various cake recipes.
Tips and Tricks: Baking tools, decoration techniques, FAQs.
Video Tutorials: Categorized by difficulty and style.
User Community: Post sharing, comments, photos, and questions.

Explore More

Leave a Comment
View Comments

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Leave a Comment

Name:

Message:

Submit

View Comments

Message List

Fiona (2025-06-03 05:29:28):
Can not live without you
Kris BTF

Fiona (2025-06-02 15:37:55):
Luca CiCi

Yuxing Zhang (2025-06-02 15:36:11):
like it
