

**Institute of Vocational Education**  
**Department of Information and Communications Technology**  
**HDICT (IT524110)**  
**ITP4606 Systems Integration and Virtualization**  
**Semester1 2024-2025**  
**Assignment/**  
**Mini-project**

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**Submission Guidelines**

- This is an individual assignment/mini-project.
- The submission deadline of the assignment is **11:59pm, 29 Dec 2024 (Sun)**.
- You need to keep the project environment on AWS Learner Lab for checking and submit the presentation video to the Moodle website <https://moodle.vtc.edu.hk> assignment dropbox before the deadline. You are advised to upload your work at a time reasonably earlier than the cut-off date and time. You will receive **NO MARKS for LATE SUBMISSION**.
- You are also required to give a demonstration recording. 40% of total marks will be deducted if a demonstration is not done.

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## 1 Aims and Objectives

In this project you are asked to:

- **Develop a Scalable Web Application:** Leverage AWS services to create a web application that can scale based on user demand.
- **Utilize AWS Cloud Infrastructure:** Make use of various AWS services for hosting, storage, and database management.
- **Implement Security Best Practices:** Ensure that the application is secure by using AWS Identity and Access Management (IAM) and other security features.

## 2 Introduction

In this project, you are required to develop a web application, which the main focus should be the virtualization part (i.e. utilization of AWS services).

### 3 Marking Guidelines

Your project will be assessed according to the items below.

#### a. Project Design (25%)

- **Clarity of Objectives:** Clearly defined aims and objectives of the project.
- **Architecture Design:** A well-structured architectural design.
- **Technology Stack Selection:** Justification for the choice of technologies and AWS services used.

#### b. Implementation (45%)

- **Functionality:** The application meets the specified requirements and functions correctly (e.g., performance, usability).
- **Service Configuration:** Proper configuration of AWS services (e.g., VPC, IAM roles, S3 buckets).

#### c. Deployment and Accessibility (20%)

- **Deployment Process:** Clear and efficient deployment of the application on AWS.
- **Accessibility:** The application is accessible over the internet, and the deployment is verified.
- **Performance:** The application performs well under expected load conditions.

#### d. Security (10%)

- **Security Measures:** Implementation of security best practices (e.g., IAM policies).

Remarks:

40% of total marks **will be deducted** if the **demonstration** is not done.

### 4 Your Submission

- Keep the project environment on AWS Learner Lab for checking
- Submit the presentation video to the Moodle website <https://moodle.vtc.edu.hk> assignment dropbox before the deadline.

**END**