

The
Management
University
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DIPLOMA UNIVERSITY EXAMINATIONS
SCHOOL OF MANAGEMENT AND LEADERSHIP
DIPLOMA IN INFORMATION COMMUNICATION
TECHNOLOGY

DIT 200 : FUNDAMENTALS OF VISUAL PROGRAMMING

DATE: 8TH APRIL 2026

DURATION: 2 HOURS

**MAXIMUM
MARKS: 70**

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **FOUR** questions.
6. Question **ONE** carries **30 MARKS** and the rest carry **10 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided.**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

Case Study: Employee Management System using Visual Basic

Overview: ABC Corporation intends to develop an Employee Management System using Visual Basic. The system will allow employees to enter their details, determine their department based on their Employee ID, calculate their bonuses, and print their information. This case study details the requirements and provides a structured approach to developing the system in Visual Basic.

Program Requirements:

User Input & Storage

The program should prompt users to enter their Employee ID, Name, and Salary. These values should be stored in appropriate variables within an Employee object. The system will ensure valid data entry by checking for empty values and numeric inputs where applicable.

Department Assignment using Select Case

The department will be assigned based on the first letter of the Employee ID. A Select Case statement will be used to determine the appropriate department:

For example:

```
Dim empDepartment As String
```

```
Select Case UCase(Left(empID, 1))
```

```
    Case "A"
```

```
        empDepartment = "Accounting"...
```

Class & Method Implementation

A class named Employee will be created to encapsulate employee attributes and provide a method to display their information.

Bonus Calculation Using Operators

Bonus calculation is based on salary ranges

Loop for Employee List

A loop will be used to store and display employee details for five employees.

This Visual Basic program efficiently handles employee data entry, department assignment, salary-based bonus calculations, and displaying stored employee information. The use of object-oriented programming (OOP) principles ensures scalability and maintainability of the system.

Required:

Write a **Visual Basic program** that performs the following tasks:

- a) **User Input & Storage** - Prompt the user to enter their **Employee ID, Name, and Salary** and store these values in appropriate variables. **[5 marks]**
- b) **Department Assignment** - Use a Select Case statement to assign a **department** based on the **first letter of the Employee ID** (e.g., 'A' for **Accounting**, 'S' for **Sales**, 'H' for **HR**). **[5 marks]**
- c) **Class & Method Implementation** - Design an Employee class with properties EmployeeID, Name, Salary, and Department. Include a method DisplayEmployeeInfo() that prints the employee's details. **[10 marks]**
- d) **Bonus Calculation Using Operators** -
 - If the salary is **above Kes. 50,000**, calculate a **10% bonus**.
 - If the salary is **between Kes. 30,000 and Kes. 50,000**, calculate a **5% bonus**.
 - Otherwise, the employee receives **no bonus**.
 - Display the **bonus amount**.**[5 marks]**
- e) Explain the concept of OOP as used in Visual basic programs. **[5 Marks]**

QUESTION TWO

Imagine a **new programmer** is using **Microsoft Visual Studio** for the first time.

- a) Explain **three essential tools or features** of the **IDE** that they should learn immediately. **[6 Marks]**

- b) Provide an example of how each feature improves coding efficiency **[4 Marks]**

QUESTION THREE

- a) Describe FOUR levels of scopes of a variable in VB programming. **[4 Marks]**
- b) Evaluate any THREE types of access modifiers used in VB programming **[6 Marks]**

QUESTION FOUR

- a) State FOUR types of loops in VB programming **[4 Marks]**
- b) List and illustrate THREE decision making control structures **[6 Marks]**

QUESTION FIVE:

- a) Write a program to assign this Value “Programming is fun” to a label when a Button is clicked in the runtime. **[5 Marks]**
- b) Identify three (3) ways to run a Visual Basic Project: **[3 marks]**
- c) Describe how a programmer can retrieve data that a user types in a Text Box **[2 Marks]**

QUESTION SIX

- a) Differentiate between a class and an object giving relevant examples as used in VB programming. **[6 Marks]**
- b) Illustrate any FOUR rules to be followed when naming elements in VB - variables, constants, controls, procedures, and so on **[4 Marks]**