BINDURA UNIVERSITY OF SCIENCE EDUCATION
FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE

BSc HONS DEGREE IN SOFTWARE ENGINEERING

SWE112: VISUAL DESIGN CONCEPTS AND DEVELOPMENT

DURATION: 3 HOURS   TOTAL MARKS: 100

INSTRUCTIONS TO CANDIDATES:
The paper consists of Section A (Theory) and Section B (Practical)   JUN 2025
Answer ALL questions

All programs to be written in VB.Net.

SECTION A (40 MARKS)

Question 1

a. Expound side-by-side execution in VB.NET.   [8]
b. List and explain the types of procedures available in VB.Net.   [4]
c. What is typical about a Windows process in regards to memory allocation?   [4]

Question 2

Compare and contrast the following in VB.NET.

a. COM and Assembly.   [6]
b. VB and VB.NET.   [4]
c. Dataset and data reader.   [6]
d. Value type and reference type.   [8]

SECTION B: Practical (60 MARKS)

Create a folder on the desktop and name it using your registration number and course code. Save all you work in this folder.

Question 3
Write vb.Net net program using classes and functions to solve the following situation;
Many of my friends ask me to walk their dogs for them. All of these friends pay me to do this and the amount I get paid depends on how long I walk their dogs for. If they have more than one dog then I don't charge the owner any extra. I like to walk the dogs in the afternoon when the weather is normally best. I need you to help me keep track of how much I am owed. Fortunately for me all of my friends have

different first names so it is really easy to separate them. I charge $10 for every 30 minutes of the walk (and I always round this up so 47 minutes would be two half-hour charges or $20). **[20]**

Question 4

a) Write vb.Net code to allow the user to enter their name, select the day of the week that their birthday falls on this year and then choose the month of their birthday from the list box. When they click the button, it should display all the information back to them as shown in Figure 1. **[10]**
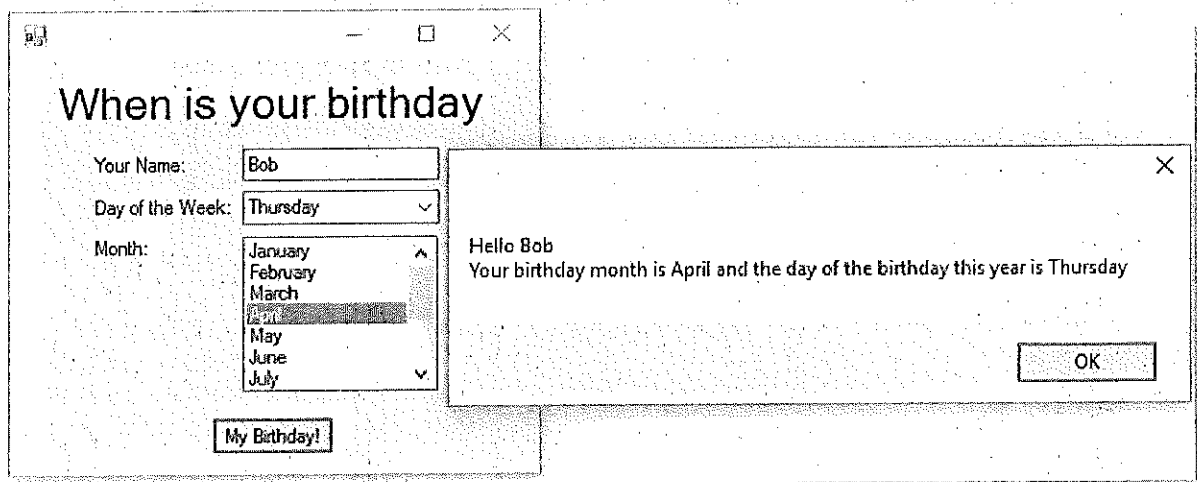

Figure 1. Birthday Finder

b) Write vb.Net code that allows the user to enter the height, width and depth of a water tank, then calculate and output the capacity as shown by Figure 2. Create a parameterized function **Volume** that will calculate and return volume when the user clicks the calculate Capacity **button**. **[10]**
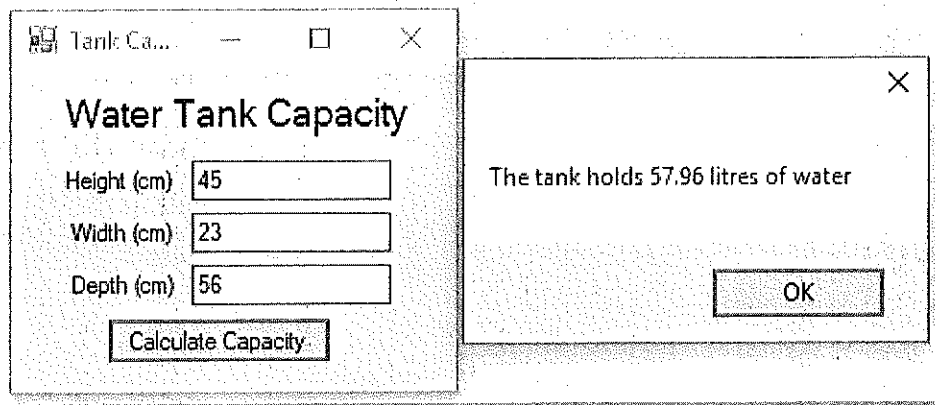
Figure 2.Water tank capacity calculator.

Question 5

Write VB.Net console program using array of structure and functions. Hint:

Create a *Structure* **Student** that contains data members **id**, *name*, and *fees*. In the *Student* structure create two member functions to **Set** and **print** Student Information. In the *Main()* function, create an array of objects of *Student* structure and then Set the values of objects and print student information on the console screen. **[20]**

***********END OF PAPER***************