

Problem C10. (Unified Computers and programming)

1. Explain the difference between the statements on the left and the statements on the right below. For each of them, what is the final value of X if the initial value of X is 3?

```
IF x >= 0 THEN
    x := x+1;
ELSIF x >=1 THEN
    x := x + 2;
END IF;
```

```
IF x >= 0 THEN
    x := x + 1;
END IF;
IF x >= 1 THEN
    x := x + 2;
END IF;
```

2. Write a simple package that contains
 - a. A function to add two integers.
 - b. A procedure to multiply two integers.

Turn in a hard copy of your code listing and an electronic copy of your code.

3. Write an Ada95 program that uses the package defined in Problem 2. Your program should:
 - a. Display a menu to the user as shown in Figure 1, and prompt him/her for a choice.
 - b. Accept a choice
 - c. Prompt the user for the inputs.
 - d. Clear the screen and display the result as shown below in Figure 2.

Turn in a hard copy of your algorithm and code listing, and an electronic copy of your code.

Hint: Use a case statement to select the required function/ procedure from the package.

Your Name's Program to Implement Simple Math Functions

1. Add Two Numbers
2. Multiply Two Integers
3. Quit

Please Enter Your Choice (1-3):

Figure 1: Menu Display

If the numbers are `First_Number` and `Second_Number`,

If the User Selects 1, the output should be:

```
Adding First_Number and Second_Number:
First_number + Second_Number = Sum
```

If the User Selects 2, the output should be

```
Multiplying First_Number and Second_Number:
First_number * Second_Number = Sum
```

Figure 2: Displaying Outputs