Assignment 5, CF, 1ˢᵗ Semester

Deadline: Submission acceptable only before Final-Exam paper
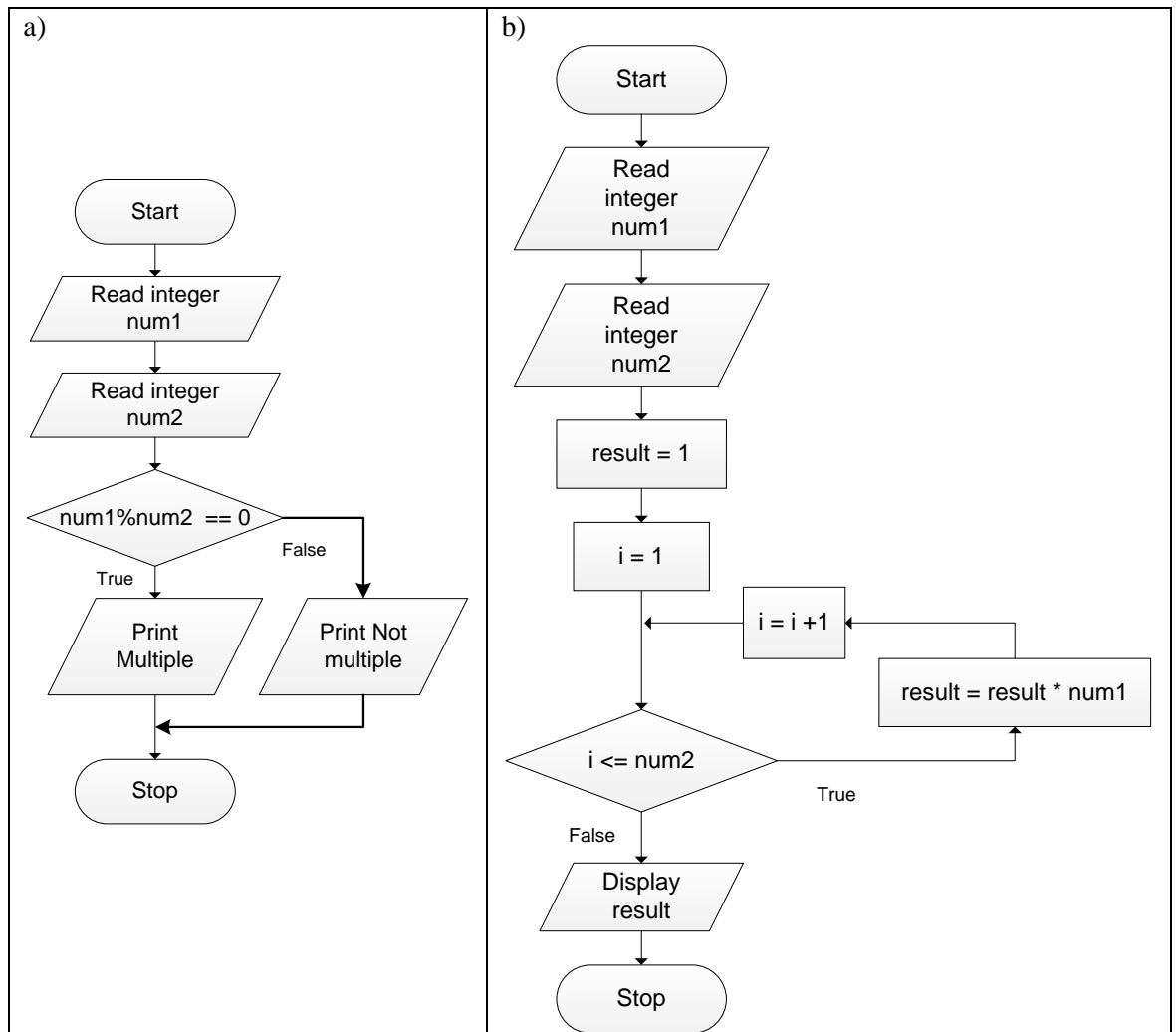
Assignment should be hand written.
Write your name, registration No. and section, or else your assignment may not be marked.
Copying is not allowed.
Write in your own words.
Staple your pages properly (binding is not required).

1. Write the pseudocode for the following flowcharts (a. if-else, b. for loop) and determine their output if `num1` entered by the user is 5 and `num2` is 4.

2. Draw the flowchart for the following pseudocodes (a. do-while loop, b. while loop). Determine the output of a. if `num` entered by the user in successive iterations is 7, 8, 9 respectively. How many times would the text "Hello!" be displayed in b. if the user enters `n` as 3, 2, 1, 0 respectively.

```
a)

SET integer result as 0
DO
    Prompt the user to enter an integer num
    READ num
    result equals sum of result and num
WHILE result is less than 20

DISPLAY result
```

```
b)

SET integer n as 99

WHILE n is not equal to 0
    Prompt the user to enter an integer n
    READ n
    DISPLAY Hello!
END WHILE
```

3. Draw the IPO chart for a program that reads a number from the user and displays the square of that number.

4. Write pseudocode and draw flowchart for a program for bank ATM. After entering the card, the program starts and asks the user to enter the four digit PIN code. The correct PIN code is "*5678*". If a wrong PIN code is entered, the error message, "You entered the wrong PIN code" is displayed and the user is prompted to enter the PIN code again. After three wrong attempts, the card is blocked and the message "Your card has been blocked due to security reasons" is displayed. In case, the user enters the correct PIN code in any of the three attempts, the message "Access granted" is displayed. (*Hint*: Use do-while loop).