Question 1

A flowchart to display the greater of the two numbers.

Algorithm

Step 1 - Input the first number (num1)

Step 2 - Input the second number (num2)

Step 3 - if num1 > num2, then

Step 4 - display "num1 is greater"

Step 5 - else

Step 6 - display "num2 is greater

Pseudo-code

Input num1

Input num2

if num1 > num2 then

display "num1 is greater"

else

display "num2 is greater"

NUM2 IS GREATER

NUM1 IS GREATER

NUM1 > NUM2

INPUT NUM1 AND NUM2

YES NO

Question 2

As a homework assignment, your teacher has given a flowchart (shown below) to find and display the square and cube of a positive number. The execution must be terminated, if a negative number is entered.

Algorithm:

Step 1 - Start

Step 2 - Input a number (num)

Step 3 - If num is negative, then

Step 4 - Display "Execution terminated"

Step 5 - End

Step 6 - Calculate square of num (square = num \* num)

Step 7 - Calculate cube of num (cube = num \* num \* num)

Step 8 - Display "Square of num is square"

Step 9 - Display "Cube of num is cube"

Step 10 - End

Pseudo-code

Start

Input num

if (num < 0) then

Display "Execution terminated"

End

square = num \* num

cube = num \* num \* num

Display "Square of num is square"

Display "Cube of num is cube"

End

END

DISPLAY SQUARE AND CUBE

CALCULATE SQUARE AND CUBE FOR NUM

NUM >= 0

NUM < 0

INPUT NUM

START

YES

NO

Question 3

Anuj, a class 9 student, has designed the following flowchart to input a positive number and check and display whether the number is a single digit number, a double digit number or a triple digit number. To assess his brother who is in class 8, he hides four statements in the flowchart.

Algorithm

Step 1 - Start

Step 2 - Input a positive number (num)

Step 3 - if num is less than 10, then

Step 4 - Display "Number is a single digit number"

Step 5 - else if num is less than 100, then

Step 6 - Display "Number is a double digit number"

Step 7 - else if num is less than 1000, then

Step 8 - Display "Number is a triple digit number"

Step 9 - else

Step 10 - Display "Number is greater than three digits"

Step 11 - End

Pseudo-code

Start

Input num

if num < 10 then

Display "Number is a single digit number"

else if num < 100 then

Display "Number is a double digit number"

else if num < 1000 then

Display "Number is a triple digit number"

else

Display "Number is greater than three digits"

End

GREATER THAN TRIPPLE DIGIT

END

TRIPPLE digit number

DOUBLE digit number

single digit number

NUM<100

NUM<100

NUM<10

INPUT NUM

START

YES

YES

YES

Question 4

Accept the age of a person and check whether he/she is eligible to vote or not. A person is eligible to vote only when he/she is 18 years or more.

Algorithm

Step 1 - Start

Step 2 - Input the age of the person (age)

Step 3 - If age is greater than or equal to 18, then

Step 4 - Display "You are eligible to vote"

Step 5 - Else

Step 6 - Display "You are not eligible to vote"

Step 7 - End

Pseudo-code

Start

Input age

if (age >= 18) then

Display "You are eligible to vote"

else

Display "You are not eligible to vote"

End

AGE >=18

NOT ELIGIBLE TO VOTE

ELIGIBLE TO VOTE

INPUT AGE

END

START

NO

YES