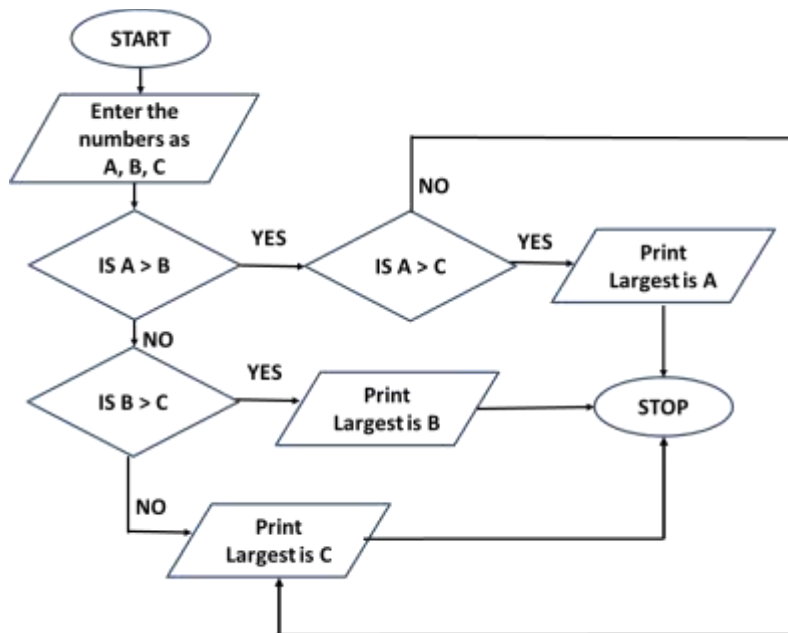


1. LARGEST OF THREE NUMBERS



Algorithm

Step 1: Start

Step 2: Read three numbers as A, B, C

Step 3: IF $A > B$ and $A > C$, Then

Print "A is largest"

Go to Step 5

Step 4: IF $B > A$ and $B > C$, Then

Print "B is largest"

ELSE

Print "C is largest"

Step 5: End

Pseudocode

Start

Read three numbers as A, B, C

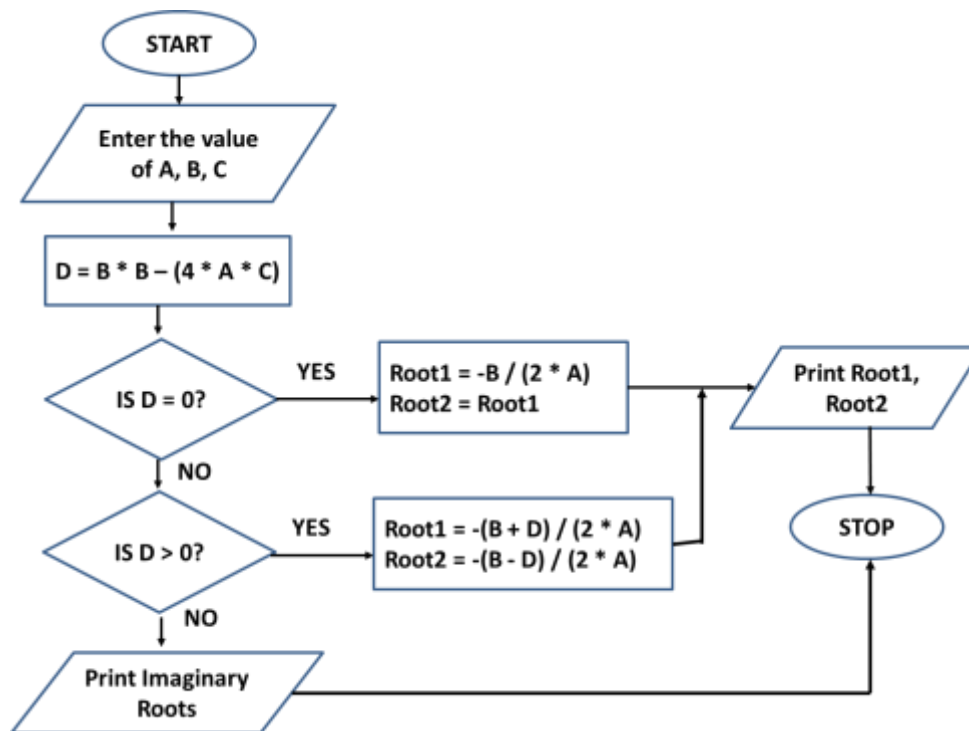
IF $A > B$ and $A > C$, Then

```

    Print "A is largest"
ELSE IF B > A and B > C, Then
    Print "B is largest"
ELSE
    Print "C is largest"
End
Variables: A, B, C

```

2. ROOTS OF QUADRATIC EQUATION



ALGORITHM

Step 1: Start

Step 2: Read the values of A, B, C

Step 3: Calculate $D = (B*B) - (4*A*C)$

Step 4: IF $D = 0$, THEN

$$\text{Root1} = -B / (2*A)$$

$$\text{Root2} = -B / (2 * A)$$

Go to Step 6

Step 5: IF $D > 0$, THEN

$$\text{Root1} = -(B + D) / (2 * A)$$

$$\text{Root2} = -(B - D) / (2 * A)$$

ELSE

Print "Imaginary Roots"

Go to Step 7

Step 6: Print Root1, Root2

Step 7: End

PSEUDOCODE

Start

Read the values of A, B, C

$$D = (B * B) - (4 * A * C)$$

IF $D = 0$, THEN

$$\text{Root1} = -B / (2 * A)$$

$$\text{Root2} = -B / (2 * A)$$

Print Root1, Root2

ELSE IF $D > 0$, THEN

$$\text{Root1} = -(B + D) / (2 * A)$$

$$\text{Root2} = -(B - D) / (2 * A)$$

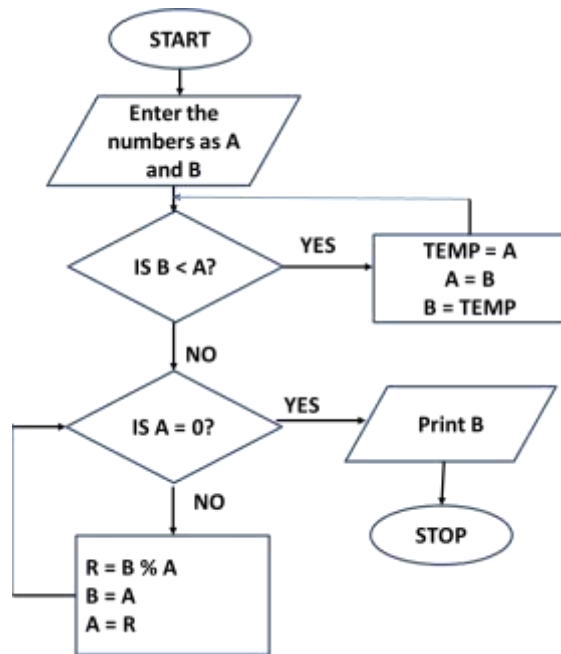
Print Root1, Root2

ELSE

Print "Imaginary Roots"

End

Variables: A, B, C, D, Root1, Root2

3. GCF**ALGORITHM**

Step 1: Start

Step 2: Read the numbers as A and B

Step 3: IF B < A, THEN

TEMP = A

A = B

B = TEMP

Step 4: Repeat Step 5

Step 5: IF A = 0, Then

Print B

Go to Step 6

ELSE

R = B % A

B = A

A = R

Step 6: Stop

PSEUDOCODE

Start

Read the numbers as A and B

IF B < A, THEN

TEMP = A

A = B

B = TEMP

WHILE A != 0

R = B % A

B = A

A = R

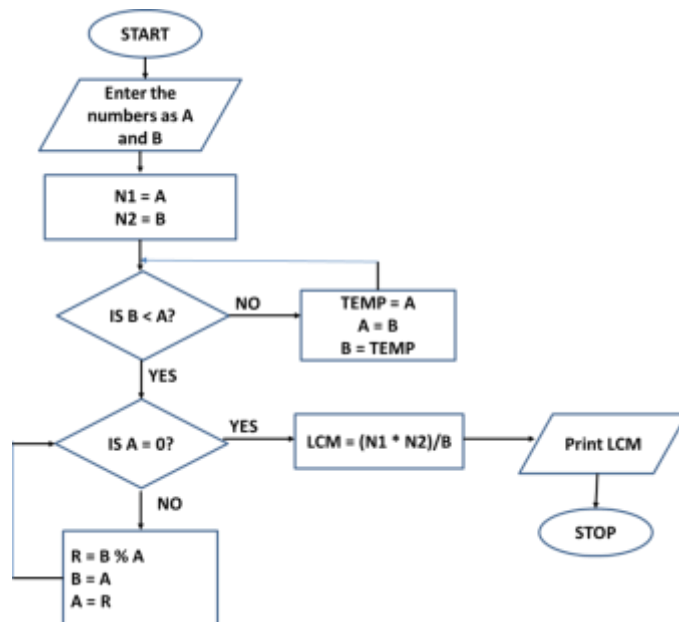
IF A = 0

Print B

Stop

Variables: A, B, R, TEMP

4. LCM



ALGORITHM

Step 1: Enter the numbers as A, B

Step 2: Set $N1 = A$

Step 3: Set $N2 = B$

Step 4: IF $B < A$

 TEMP = A

 A = B

 B = TEMP

Step 4: Repeat Step 5

Step 5: IF $A = 0$, Then

$LCM = (N1 * N2) / B$

 Print LCM

 Go to Step 6

 ELSE

$R = B \% A$

 B = A

 A = R

Step 6: Stop

PSEUDOCODE

Enter the numbers as A, B

$N1 = A$

$N2 = B$

IF $B < A$

 TEMP = A

 A = B

 B = TEMP

WHILE TRUE

IF A = 0, Then

$LCM = (N1 * N2) / B$

Print LCM

Go to Step 6

ELSE

$R = B \% A$

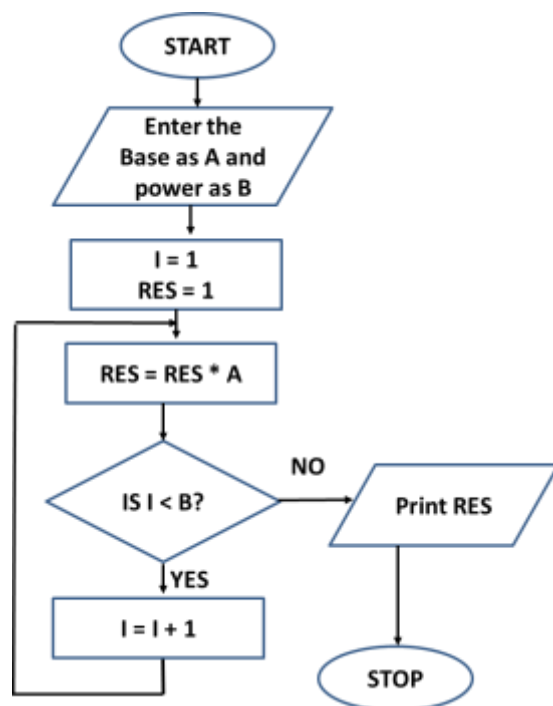
$B = A$

$A = R$

Stop

Variables: A, B, R, TEMP, LCM, N1, N2

5. EXPONENTIATION



ALGORITHM

Step 1: Enter the base as A and power as B

Step 2: Set I = 1

Step 3: Set $RES = 1$

Step 4: Calculate $RES = RES * A$

Step 5: IF $I < B$, Then

 Calculate $I = I + 1$

 Go to Step 4

ELSE

 Print RES

 Go to step 6

Step 6: Stop

PSEUDOCODE

Enter the base as A and power as B

$I = 1$

$RES = 1$

WHILE $I < B$,

$RES = RES * A$

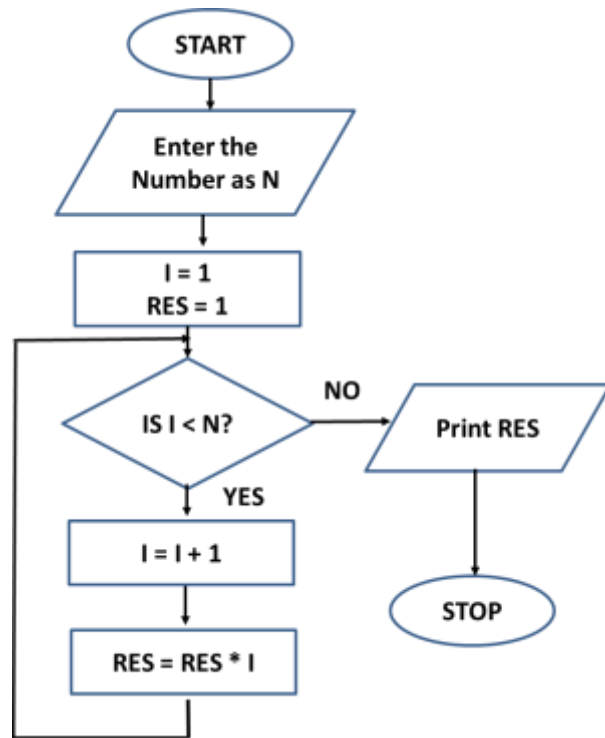
$I = I + 1$

Print RES

Stop

Variables: I, B, A, RES

6. FACTORIAL



ALGORITHM

Step 1: Start

Step 2: Enter the number as N

Step 3: Set $I = 1$

Step 4: Set $RES = 1$

Step 5: Repeat Steps 5 – 6 WHILE $I < N$

Step 6: Calculate $I = I + 1$

Step 7: Calculate $RES = RES * I$

Step 8: Print RES

Step 9: Stop

PSEUDOCODE

Start

Enter the number as N

$I = 1$

$RES = 1$

WHILE $I < N$

$I = I + 1$

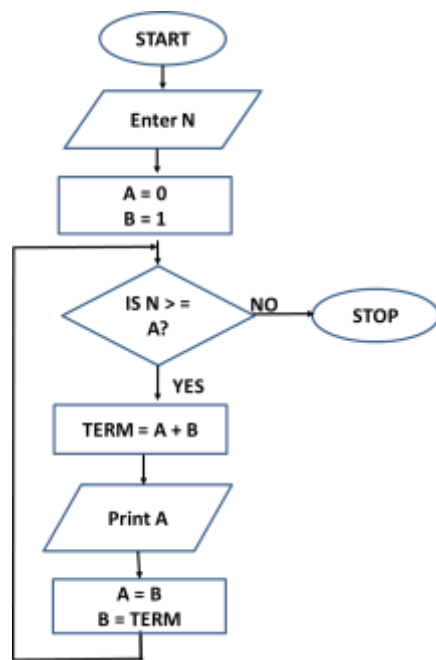
$RES = RES * I$

Print RES

Stop

Variables: I, N, RES

7. Nth FIBONACCI TERM



ALGORITHM

Step 1: Start

Step 2: Enter N

Step 3: SET A = 0

Step 4: SET B = 1

Step 5: Repeat Steps 6-9 WHILE $N \geq A$

Step 6: Calculate $TERM = A + B$

Step 7: Print A

Step 8: Set A = B

Step 9: Set B = TERM

Step 10: Stop

PSEUDOCODE

Start

Enter N

A = 0

B = 1

WHILE N >= A

 TERM = A + B

 Print A

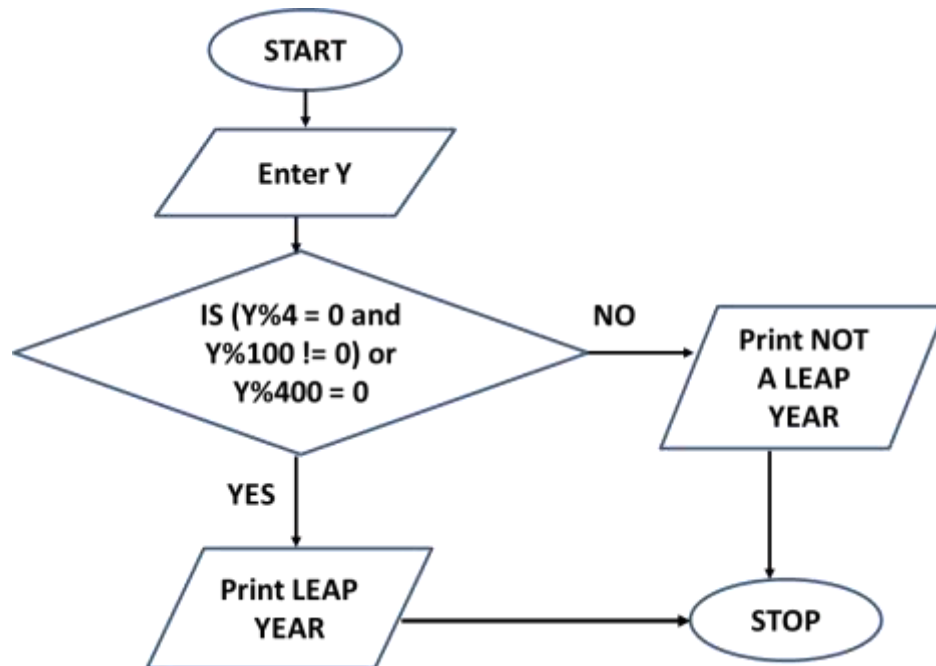
 A = B

 B = TERM

Stop

Variables: A, B, N, TERM

8. Leap Year

**ALGORITHM**

Step 1: Start

Step 2: Enter year as Y

Step 3: IF (Y%4 = 0 and Y % 100 != 0) or Y % 400 = 0, THEN

Print Leap Year

ELSE

Print Not a Leap Year

Step 4: Stop

PSEUDOCODE

Start

Enter year as Y

IF (Y%4 = 0 and Y % 100 != 0) or Y % 400 = 0

Print Leap Year

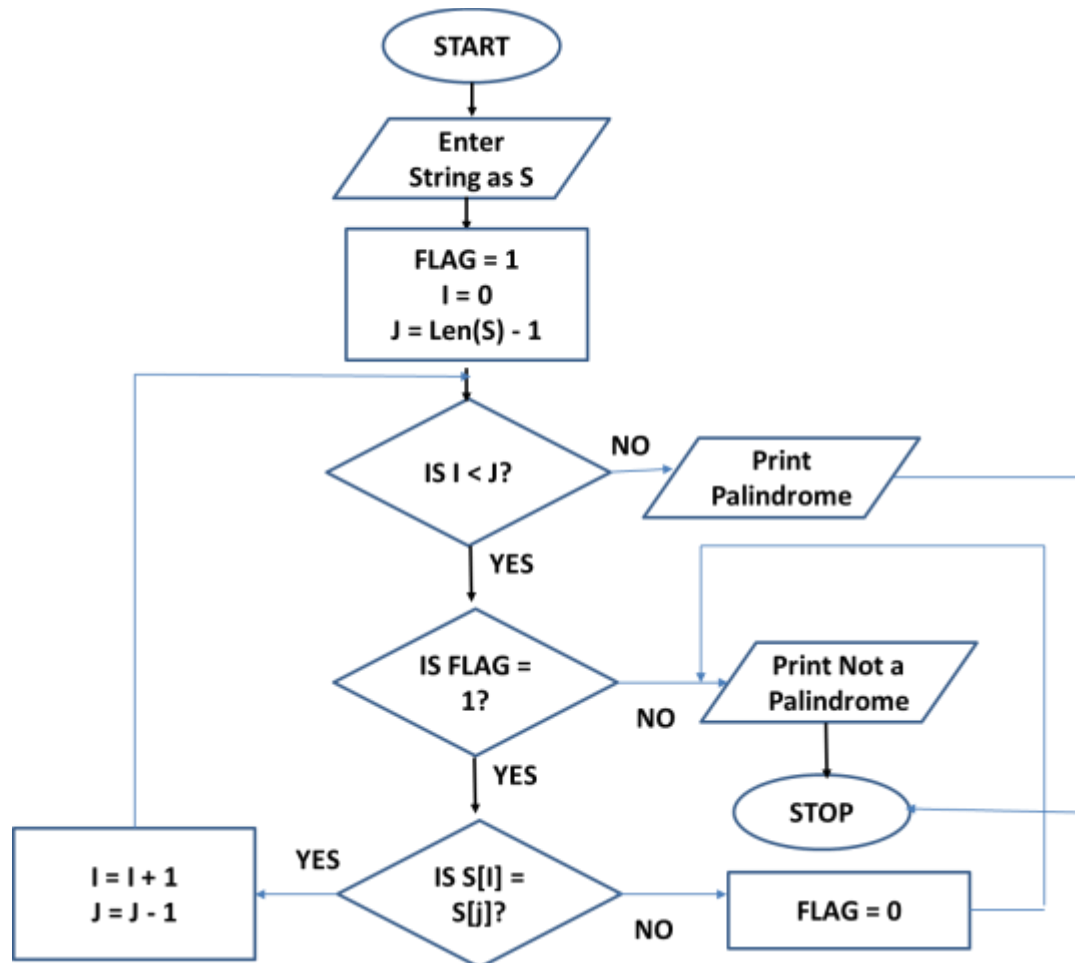
ELSE

Print Not a Leap Year

Stop

Variables: Y

10. Palindrome



ALGORITHM

Step 1: Start

Step 2: Enter string as S

Step 3: SET Flag = 1

Step 4: SET I = 0

Step 5: SET J = LEN(S) – 1

Step 6: REPEAT Steps 7 – 8 WHILE I < J

Step 7: REPEAT Steps 8 WHILE FLAG = 1

Step 8: IF $S[I] = S[J]$

Set $I = I + 1$

Set $J = J - 1$

ELSE

Set Flag = 0

Step 9: IF $I \geq J$ and FLAG = 1, Then

Print Palindrome

ELSE

Print Not a Palindrome

Step 10: Stop

PSEUDOCODE

Start

Enter string as S

Flag = 1

$I = 0$

$J = \text{LEN}(S) - 1$

WHILE $I < J$ and Flag = 1

WHILE FLAG = 1

IF $S[I] = S[J]$

$I = I + 1$

$J = J - 1$

ELSE

Flag = 0

IF $I \geq J$ and FLAG = 1, Then

Print Palindrome

ELSE

Print Not a Palindrome

Stop

Variables: I, J, S, FLAG