Subject: Programming and Problem-Solving

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ASSIGNMENT NO: 2-A

AIM: Write an algorithm and draw a flowchart to find the roots of quadratic equation

OBJECTIVE:

1. To learn design and development of algorithm.

2. To understand importance of flowchart for any programming model.

3. To learn simple flowchart symbols and arrows to define relationships.

4. Solve a quadratic equation with real coefficients by factorization and by using

quadratic formula

THEORY:

1)Flowchart to find the roots of quadratic equation

2)Algorithm to find the roots of quadratic equation

3) Concept of Quadratic Equation

4) Pseudocode

Flowchart to calculate the Roots of Quadratic Equation

START

INPUT a,b,c

D=sqrt(b\*b-4\*a\*c)

PRINT X1,X2

STOP

X1=(-b+D)/(2\*a)

X2=(-b-D)/(2\*a)

Algorithm to find the roots of quadratic equation

Step1) Start

Step2) Input a, b, c

Step3) Calculate value of D using formula D=sqrt(b\*b-4\*a\*c)

Step4) Calculate the first root X1 using formula X1=(-b +D)/(2\*a)

Step5) Calculate the first root X2 using formula X2=(-b-D)/(2\*a)

Step6) Print X1 ,X2

Step7) Stop

PLATFORM: 64 –bit Windows 10.

INPUT: Give any 3 coefficients

OUTPUT: Roots of quadratic equation of nature real and imaginary

CONCLUSION: Thus we have learned to draw algorithm and flowchart for how to

compute roots for quadratic equation

START

INPUT a,b,c

D=sqrt(b\*b-4\*a\*c)

PRINT X1,X2

STOP

X1=(-b+D)/(2\*a)

X2=(-b-D)/(2\*a