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| **TEST CODE : TCS Ninja - Coding\_6**  Total number of question : 1  Test duration (min) : 20 min  Correct attempt (mark) : NA  Wrong attempt (mark) : NA |

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**CODING**

**Given two lines, write Program for finding its intersection point**

#include <stdio.h>

int main()

{

float x1, y1, x2, y2;

scanf("%f,%f\n%f,%f", &x1, &y1, &x2, &y2);

float x3,y3,x4,y4;

scanf("%f,%f\n%f,%f", &x3, &y3, &x4, &y4);

float m1 = (y2-y1)/(x2-x1);

float m2 = (y4-y3)/(x4-x3);

// Line 1

// y = y1 + m \* (x - x1);

// y = y1 + m \* (x - x1);

// y = m1\*x + y1 - m1 \* x1

// Line 2

// y = y1 + m \* (x - x1);

// y = y3 + m2 \* (x - x3);

// y = m2\*x + y3 - m2 \* x3

// Solving line 1 and line 2 eqn

float x\_intersection = (y1 - m1 \* x1 - y3 + m2 \* x3)/(m2-m1);

float y\_intersection = y1 + m1 \* (x\_intersection - x1);

printf("%0.2f,%0.2f", x\_intersection, y\_intersection);

return 0;

}