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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

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;
}
```

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