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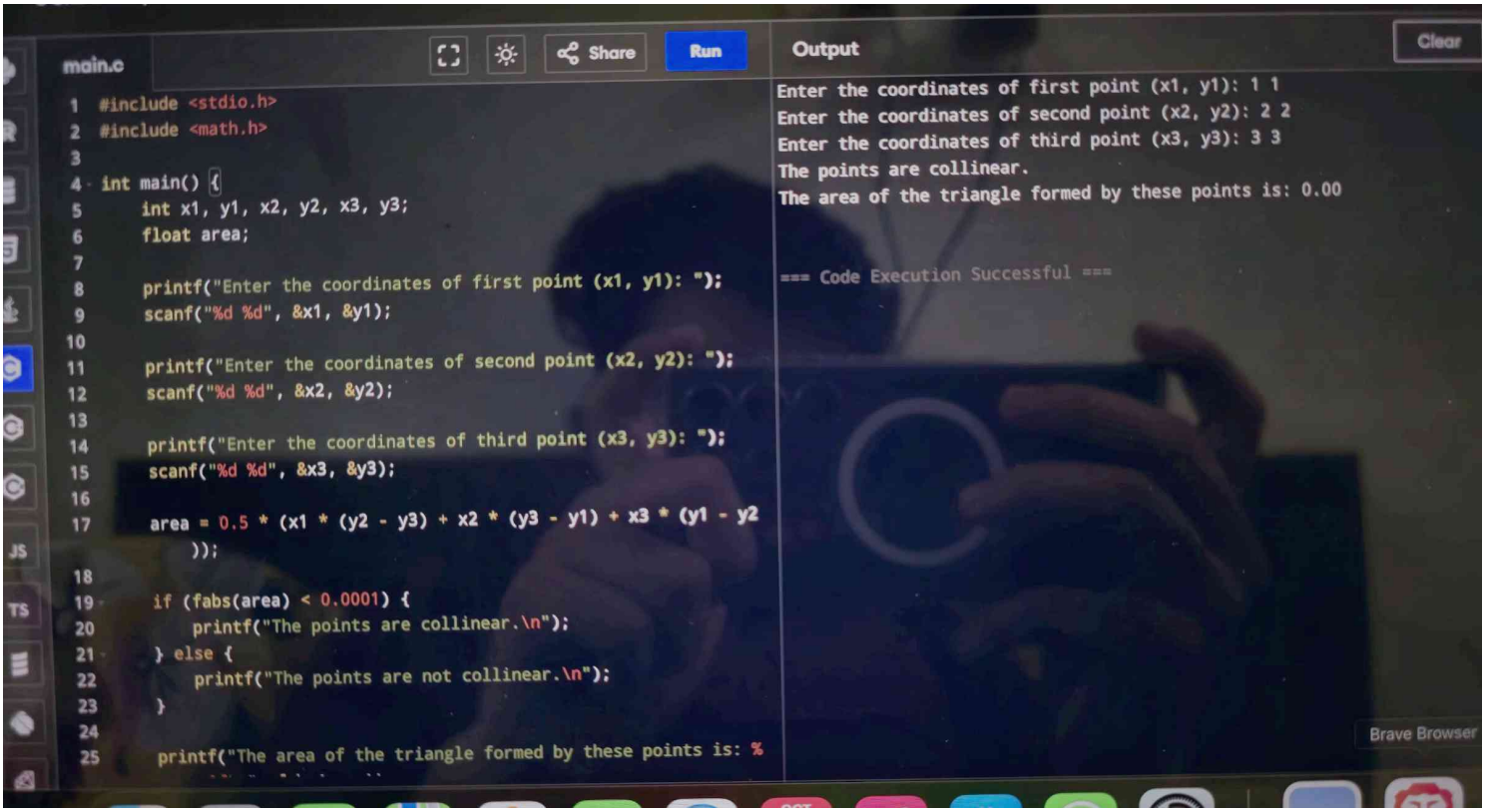
Q.3 WAP to check if three points $(x1, y1)$, $(x2, y2)$ and $(x3, y3)$ are collinear or not.

```
#include <stdio.h>
int main()
{
  int x1, y1, x2, y2, x3, y3, area;
  printf("Enter the Coordinates of first point (x1,y1);");
  scanf("%d %d", &x1, &y1);
  printf("Enter the Coordinates of second point (x2,y2
                                                  :");
  scanf("%d %d", &x2, &y2);
  printf("Enter the Coordinates of third point
                                  (x3, y3);");
  scanf("%d %d", &x3, &y3);
area = 0.5*((x1*(y2-y3))+(x2*(y3-y1))+(x3*
                                  (y1-y2)));
  if (area == 0)
    printf("The points are Collinear \n");
  else
    printf("The points are not collinear. \n");
    return 0;
  }
```


main.c
Share
Run
Output
Clear
#include <stdio.h>
#include <math.h>
int main() {
int x1, y1, x2, y2, x3, y3;
float area;
printf("Enter the coordinates of first point (x1, y1): ");
scanf("%d %d", &x1, &y1);
printf("Enter the coordinates of second point (x2, y2): ");
scanf("%d %d", &x2, &y2);
printf("Enter the coordinates of third point (x3, y3): ");
scanf("%d %d", &x3, &y3);
area = 0.5 * (x1 * (y2 - y3) + x2 * (y3 - y1) + x3 * (y1 - y2
));
if (fabs(area) < 0.0001) {
printf("The points are collinear.\n");
} else {
printf("The points are not collinear.\n");
}
printf("The area of the triangle formed by these points is: %
Enter the coordinates of first point (x1, y1): 1 1
Enter the coordinates of second point (x2, y2): 2 2
Enter the coordinates of third point (x3, y3): 3 3
The points are collinear.
The area of the triangle formed by these points is: 0.00
=== Code Execution Successful ===
Brave Browser