```c
#include <stdio.h>

//DEFINING STRUCT
struct MyPoint
{
    int x;
    int y;
};

//DEFINING STRUCT
struct MyPointProperties
{
    int quadrant;
    char axis_location[10];
};

int main(void)
{
    //variable declarations
    struct MyPoint point; //declaring a single variable of type 'struct MyPoint' locally...
    struct MyPointProperties point_properties; //declaring a single variable of type 'struct MyPointProperties' locally...

    //code
    //User Input For The Data Members Of 'struct MyPoint' variable 'point_A'
    printf("\n\n");
    printf("Enter X-Coordinate For A Point : ");
    scanf("%d", &point.x);
    printf("Enter Y-Coordinate For A Point : ");
    scanf("%d", &point.y);

    printf("\n\n");
    printf("Point Co-ordinates (x, y) Are : (%d, %d) !!!\n\n", point.x, point.y);

    if (point.x == 0 && point.y == 0)
        printf("The Point Is The Origin (%d, %d) !!!\n", point.x, point.y);
    else // Atleast One of the two values (either 'X' or 'Y' or BOTH) is a non-zero value...
    {
        if (point.x == 0) // If 'X' IS ZERO...OBVIOUSLY 'Y' IS THE NON-ZERO VALUE
        {
            if (point.y < 0) // If 'Y' IS -ve
                strcpy(point_properties.axis_location, "Negative Y");

            if (point.y > 0) // If 'Y' IS +ve
                strcpy(point_properties.axis_location, "Positive Y");

            point_properties.quadrant = 0; // A Point Lying On Any Of The Co-ordinate Axes Is NOT A Part Of ANY Quadrant...
            printf("The Point Lies On The %s Axis !!!\n\n", point_properties.axis_location);
```

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48
49          }
50          else if (point.y == 0) // If 'Y' IS ZERO...OBVIOUSLY 'X' IS THE NON-ZERO
              VALUE
51          {
52              if (point.x < 0) // If 'X' IS -ve
53                  strcpy(point_properties.axis_location, "Negative X");
54
55              if (point.x > 0) // If 'X' IS +ve
56                  strcpy(point_properties.axis_location, "Positive X");
57
58              point_properties.quadrant = 0; // A Point Lying On Any Of The Co-
                  ordinate Axes Is NOT A Part Of ANY Quadrant...
59              printf("The Point Lies On The %s Axis !!!\n\n",
                  point_properties.axis_location);
60          }
61          else // BOTH 'X' AND 'Y' ARE NON-ZERO
62          {
63              point_properties.axis_location[0] = '\0'; // A Point Lying In ANY Of
                  The 4 Quadrants Cannot Be Lying On Any Of The Co-ordinate Axes...
64
65              if (point.x > 0 && point.y > 0)      // 'X' IS +ve AND 'Y' IS +ve
66                  point_properties.quadrant = 1;
67
68              else if (point.x < 0 && point.y > 0) // 'X' IS -ve AND 'Y' IS +ve
69                  point_properties.quadrant = 2;
70
71              else if (point.x < 0 && point.y < 0) // 'X' IS -ve AND 'Y' IS -ve
72                  point_properties.quadrant = 3;
73
74              else                                 // 'X' IS +ve AND 'Y' IS -ve
75                  point_properties.quadrant = 4;
76
77              printf("The Point Lies In Quadrant Number %d !!!\n\n",
                  point_properties.quadrant);
78          }
79      }
80
81      return(0);
82  }
83
```