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#include <stdio.h>
#include <graphics.h>

int main() {
   int n, i, j, k, gd = DETECT, gm, dy, dx;
   int x, y, temp;
   int a[20][2], xi[20];
   float slope[20];

   // Input the number of edges
   printf("\nEnter the number of edges of polygon (up to 20): ");
   scanf("%d", &n);

   if (n < 3 || n > 20) {
      printf("Invalid number of edges. Please enter a number between 3 and 20.\n");
      return 1;
   }

   // Input polygon coordinates
   printf("\nEnter the coordinates of the polygon (x y):\n");
   for (i = 0; i < n; i++) {
      printf("\tx%d y%d: ", i, i);
      scanf("%d %d", &a[i][0], &a[i][1]);
   }

   // Close the polygon by connecting the last vertex to the first
   a[n][0] = a[0][0];
   a[n][1] = a[0][1];

   // Initialize the graphics mode
     initgraph(&gd, &gm, (char*)"");
```

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if (graphresult() != grOk) {
   printf("Graphics initialization failed.\n");
   return 1;
}

// Draw the polygon
for (i = 0; i < n; i++) {
   line(a[i][0], a[i][1], a[i + 1][0], a[i + 1][1]);
}

// Calculate the slope for each edge
for (i = 0; i < n; i++) {
   dy = a[i + 1][1] - a[i][1];
   dx = a[i + 1][0] - a[i][0];

   if (dy == 0) {
      slope[i] = 1.0;  // Horizontal line
   } else if (dx == 0) {
      slope[i] = 0.0;  // Vertical line
   } else {
      slope[i] = (float)dx / dy;  // General case
   }
}

// Perform scanline fill
for (y = 0; y < getmaxy(); y++) {
   k = 0;
   for (i = 0; i < n; i++) {
      // Check for intersection with scanline
      if (((a[i][1] <= y) && (a[i + 1][1] > y)) || ((a[i][1] > y) && (a[i + 1][1] <= y))) {
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            xi[k] = (int)(a[i][0] + slope[i] * (y - a[i][1]));
            k++;
         }
      }

      // Sort the intersections
      for (j = 0; j < k - 1; j++) {
         for (i = 0; i < k - 1; i++) {
            if (xi[i] > xi[i + 1]) {
               temp = xi[i];
               xi[i] = xi[i + 1];
               xi[i + 1] = temp;
            }
         }
      }

      // Draw the horizontal lines between intersections
      setcolor(5);  // Set color to magenta
      for (i = 0; i < k; i += 2) {
         line(xi[i], y, xi[i + 1], y);
             delay(10);
      }
   }

   getch();
   closegraph();
   return 0;
}
```

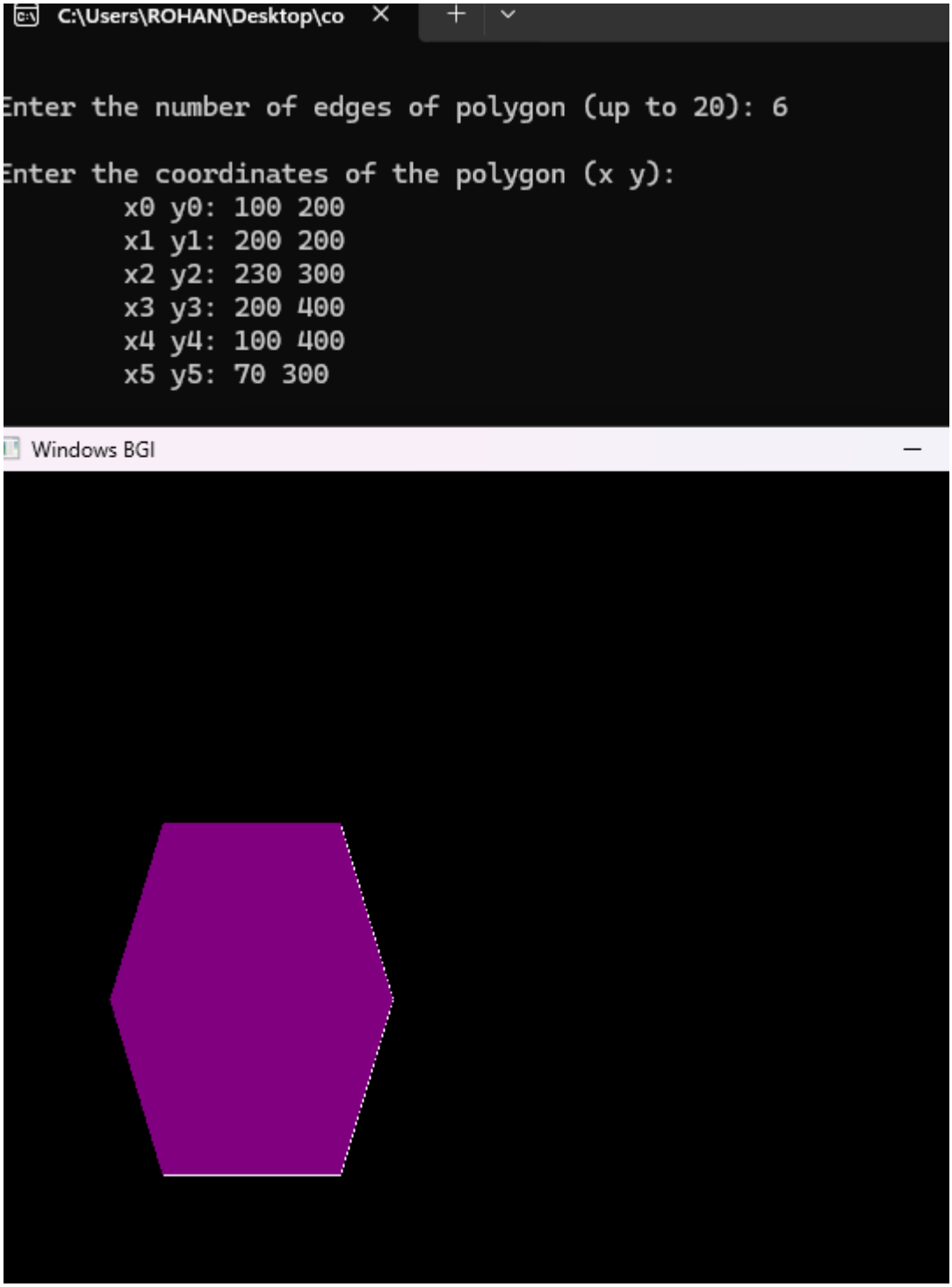
C:\Users\ROHAN\Desktop\co
Enter the number of edges of polygon (up to 20): 6
Enter the coordinates of the polygon (x y):
x0 y0: 100 200
x1 y1: 200 200
x2 y2: 230 300
x3 y3: 200 400
x4 y4: 100 400
x5 y5: 70 300
Windows BGI