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/*
      polygon.c
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*/

#include <stdio.h>
#include <stdlib.h>
#include "fig.h"
#include "shape4.h"
#define TEST
#define MAX 1024

/*
      draw the struct Polygon in a FIG format
*/

int polygon_draw(FILE *fp, struct Polygon polygon)
{
      int rval;
      int *x, *y;
    x = (int *) malloc(sizeof(int) * polygon.npoints);
    y = (int *) malloc(sizeof(int) * polygon.npoints);
    convert(polygon.vertex, polygon.npoints, x, y);
      rval = fig_polygon(fp, x, y, polygon.npoints, NULL);
    free(x); free(y);
    return rval;
}
#ifdef TEST

int main(int argc, char *argv[], char *env[])
{
      struct Polygon heptagon;
      char ostream[MAX];
      char *shape;
      shape=fgetshape();
      printf("%s", shape);

      fig_open(stdout);
      fig_userinfo(stdout, 1, "ECE263L4P1", "Nathan Christian",
"6/19/2017");

    polygon_sscanf(shape, &heptagon);
      polygon_draw(stdout, heptagon);
      polygon_sprintf(ostream, heptagon);
      fprintf(stderr, "%s\n", ostream);
      polygon_free(&heptagon);

      return;
}
#endif
```