Codeblock Shooter

The challenge, write a program that takes up no more than 1920 characters, or as many as would fit in an 80x24 block, the same size as the "standard" terminal. The result, a game that doesn't take much typing before you can play it.

Rotate you ship with the left and right arrow keys. Go forward and back with the up and down arrow, and shoot with the 'z' key.

Codeblock Shooter was written by Terry Cavanagh.

/* codeblockshooter.cpp listing begins: */

```
#include <allegro.h>
#include <math.h>
BITMAP *b;

class m {
public:
    double x,y,d;
    int t;
};

class pc {
public:
    void c(int i, int j, double d, int z) {
        p[n].x=i;
        p[n].y=j;
        p[n].t=z;
        p[n].d=d;
        n++;
    }
    void cp(int i, int j) {
        p[i].x=p[j].x;
        p[i].y=p[j].y;
        p[i].t=p[j].t;
        p[i].d=p[j].d;
    }
    void d(int t) {
        if (t==n-1)n--;
        else {
            for (int i=t;i<n;i++)cp(i,i+1);
            n--;
        }
    }
    m p[999];
    int n;
};

void r(int x, int y, int s, int c) {
    rectfill(b, x, y, x+s, y+s, c);
}

int main() {
    allegro_init();
    srand(time(0));
    install_keyboard();
    double x=315, y=235, d=0, t, s, f, g=0, k=0, u=0, o=0;
    int a,w=640, h=480;
    b=create_bitmap(w, h);
    pc p;
    p.n=0;
    set_gfx_mode(2, w, h, 0, 0);

    while (!key[KEY_ESC]&&u==0) {
        acquire_bitmap(b);
        clear_bitmap(b);

        for (int i=0;i<p.n;i++) {
            t=p.p[i].x;
            s=p.p[i].y;
            o=p.p[i].t;
            if (o==0) r(t, s, 2, makecol(255, 255, 255));
            if (o==1) r(t, s, 15, makecol(255, 0, 0));
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        }

        circlefill(b, x, y, 5, makecol(0, 128, 255));
        t=x+(sin(d)*40);
        s=y+(cos(d)*40);
        hline(b, t-3, s, t+3, makecol(196, 196, 196));
        vline(b, t, s-3, s+3, makecol(196, 196, 196));

        blit(b, screen, 0, 0, 0, 0, w, h);
        release_bitmap(b);
        vsync();

        //input
        if (key[84]) {
            x+=sin(d)*4;
            y+=cos(d)*4;
        }
        if (key[82]) d+=0.125;
        if (key[85]) {
            x-=sin(d)*4;
            y-=cos(d)*4;
        }
        if (key[83]) d-=0.125;
        if (key[26]) f=1;
        else f=0;

        //logic
        if (d<0) d+=6.24;
        if (d>7)d-=6.24;
        if (x<0)x=0;
        if (y<0)y=0;
        if (x>w)x=w;
        if (y>h)y=h;
        if (g<0) {
            if (f==1) {
                g=10;
                p.c(x,y,d-0.1,0);
                p.c(x,y,d+0.1,0);
                p.c(x,y,d,0);
            }
        } else g--;

        //update pars
        for (int i=0;i<p.n;i++) {
            t=p.p[i].x;
            s=p.p[i].y;
            o=p.p[i].t;
            if (o==0) {
                for (int j=0;j<p.n;j++) {
                    if (p.p[j].t==1 && abs(p.p[j].x-t)<12
                    && abs(p.p[j].y-s)<12) p.d(j);
                }
                p.p[i].x+=sin(p.p[i].d)*10;
                p.p[i].y+=cos(p.p[i].d)*10;
                if (t<-10||t>w||s<-10||s>h) p.d(i);
            }
            if (o==1) {
                if (t>x)t--;
                if (t<x)t++;
                if (s>y)s--;
                if (s<y)s++;
                p.p[i].x=t;
                p.p[i].y=s;
```

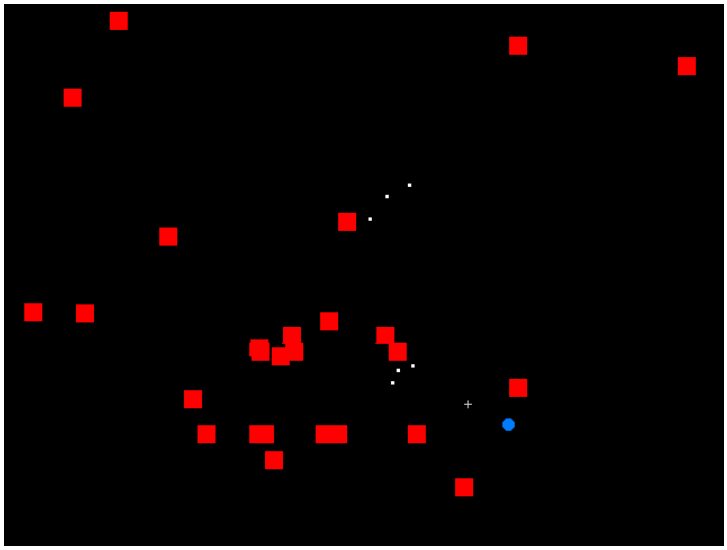

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```
                if (abs(t-x)<10 && abs(s-y)<10) u=1;
            }
        }

        if (k<0) {
            k=10;
            t=rand()%4;
            a=rand();
            if (t==0)p.c(a%w,0,0,1);
            if (t==1)p.c(a%w,w,0,1);
            if (t==2)p.c(0,a%h,0,1);
            if (t==3)p.c(w,a%h,0,1);
        } else k--;
    }
}
END_OF_MAIN()
```