ธีรุตม์ เอี้ยวสกุลรัตน์ 65010495 Lab7 พื้นฐานการเขียน Text-mode Game ครั้งที่ 3

```c
#include<stdio.h>
#include<conio.h>
#include<Windows.h>
#include<stdbool.h>
#include<time.h>

// Set color
void setcolor(int fg, int bg) {
    HANDLE hConsole = GetStdHandle(STD_OUTPUT_HANDLE);
    SetConsoleTextAttribute(hConsole, bg * 16 + fg);
}
void gotoxy(int x, int y)
{
    COORD c = { x,y };
    SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE), c);
}
// Ship
void draw_ship(int x, int y) {
    gotoxy(x, y);
    setcolor(2, 4);
    printf("<-0->");
}
void erase_ship(int x, int y) {
    gotoxy(x, y);
    setcolor(0, 0);
    printf("     ");
}
// Bullet
void draw_bullet(int x, int y) {
    gotoxy(x, y);
    setcolor(7, 1);
    printf("^");
}
void erase_bullet(int x, int y) {
    gotoxy(x, y);
    setcolor(7, 0);
    printf(" ");
}
//Star
void drawStar()
{
    int x, y;
    x = rand() % 71 + 10; // (10,70)
    y = rand() % 6 + 2;   // (2,5)
    setcolor(3, 0);
    gotoxy(x, y);
    printf("*");
}
//Set cursor
void setcursor(bool visible)
{
    HANDLE console = GetStdHandle(STD_OUTPUT_HANDLE);
    CONSOLE_CURSOR_INFO lpCursor;
    lpCursor.bVisible = visible;
    lpCursor.dwSize = 20;
    SetConsoleCursorInfo(console, &lpCursor);
}
char cursor(int x, int y) {
    HANDLE hStd = GetStdHandle(STD_OUTPUT_HANDLE);
    char buf[2]; COORD c = { x,y };
    DWORD num_read;
    if (
        !ReadConsoleOutputCharacter(hStd, (LPTSTR)buf, 1, c, (LPDWORD)&num_read))

        return '\0';
    else {
        return buf[0];
    }
}
```

```
int main()
{
    setcursor(0);
    srand(time(NULL));
    char ch = ' ';
    int x = 38, y = 20;
    char direction = '0';
    int statebullet[5] = { 0,0,0,0,0 };
    int bulletX[5], bulletY[5];
    int score = 0;
    for (int i = 0; i < 20; i++)
    {
        drawStar();
    }
    setcolor(2, 0);
    draw_ship(x, y);
    int n = 0;
    do {
        if (_kbhit())
        {
            ch = _getch();
            if (ch == 'a')
            {
                direction = 'L'; //left
            }
            if (ch == 'd')
            {
                direction = 'R';//right
            }
            if (ch == 's')
            {
                direction = 'S';//Stop
            }
            //Bullet Motion
            if (ch == ' ' && statebullet[n] == 0)
            {
                Beep(700, 100);
                statebullet[n] = 1; //statebullet On
                bulletX[n] = x + 2;
                bulletY[n] = y - 1;
                n++;
                //reset bullet
                if (n == 5)
                {
                    n = 0;
                }
            }
            fflush(stdin);
        }
        //check
        if (direction == 'L' && x != 0)
        {
            erase_ship(x, y);
            draw_ship(--x, y);
        }
        if (direction == 'R' && x != 80)
        {
            erase_ship(x, y);
            draw_ship(++x, y);
        }
        if (direction == 'S' || x == 0 || x == 80)
        {
            draw_ship(x, y);
        }
        //Run statebullet
        for (int j = 0; j < 5; j++)
        {
            if (statebullet[j] == 1)
            {
                erase_bullet(bulletX[j], bulletY[j]); //erase current bullet
                if (bulletY[j] > 0 && cursor(bulletX[j], bulletY[j] - 1) != '*')
                {
                    draw_bullet(bulletX[j], --bulletY[j]);
                }
                else if (cursor(bulletX[j], bulletY[j] - 1) == '*')
                {
                    erase_bullet(bulletX[j], bulletY[j] - 1);
                    drawStar();
                    score++;
                    Beep(700, 400);
                    statebullet[j] = 0;
                }
                else
                {
                    statebullet[j] = 0;
                }
            }
        }
        setcolor(2, 0);
        gotoxy(90, 3);
        printf("Score : %d", score);
        Sleep(100);
    }while (ch != 'x');
    return 0;
}
```


C:\Users\Teeruth\OneDrive\เดสก์ท็อป\ส่งงาน pro fun\lab\lab7\Lab7\Lab7\65010495_lab7.exe
Score : 4
<-0->
*
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