// cl /c utilwin32.c

#include <windows.h>

static HANDLE hConsole = 0;
static int instanceCount = 0;

void gotoxy(int x, int y)
{
    COORD coord;
    if(instanceCount == 0)
    {
        hConsole = GetStdHandle(STD_OUTPUT_HANDLE);
        instanceCount = 1;
    }
    coord.X = x - 1;
    coord.Y = y - 1;
    SetConsoleCursorPosition(hConsole, coord);
}

void clrscr()
{
    COORD coordScreen = { 0, 0 }; /* here's where we'll home the cursor */
    BOOL bSuccess;
    DWORD cCharsWritten;
    CONSOLE_SCREEN_BUFFER_INFO csbi; /* to get buffer info */
    DWORD dwConSize; /* number of character cells in the current buffer */
    if(instanceCount == 0)
    {
        hConsole = GetStdHandle(STD_OUTPUT_HANDLE);
        instanceCount = 1;
    }
    /* get the number of character cells in the current buffer */
    bSuccess = GetConsoleScreenBufferInfo(hConsole, &csbi);
    dwConSize = csbi.dwSize.X * csbi.dwSize.Y;
    /* fill the entire screen with blanks */
    bSuccess = FillConsoleOutputCharacter(hConsole, (TCHAR) ' ',
                                          dwConSize, coordScreen, &cCharsWritten);
    /* get the current text attribute */
    bSuccess = GetConsoleScreenBufferInfo(hConsole, &csbi);
    /* now set the buffer's attributes accordingly */
    bSuccess = FillConsoleOutputAttribute(hConsole, csbi.wAttributes,
                                           dwConSize, coordScreen, &cCharsWritten);
    /* put the cursor at (0, 0) */
    bSuccess = SetConsoleCursorPosition(hConsole, coordScreen);
    return;
}

void delay(int milliSecond)
{
    Sleep(milliSecond);
}

WORD setTextColor(WORD color)
{
    CONSOLE_SCREEN_BUFFER_INFO csbi;
    WORD oldColor;
    if (instanceCount == 0)
    {
        hConsole = GetStdHandle(STD_OUTPUT_HANDLE);
        instanceCount = 1;
    }
    if (GetConsoleScreenBufferInfo(hConsole, &csbi))
    oldColor = csbi.wAttributes;
    else
    oldColor = FOREGROUND_RED | FOREGROUND_GREEN |
               FOREGROUND_BLUE | FOREGROUND_INTENSITY;
    if (color==0x00) color = FOREGROUND_RED | FOREGROUND_GREEN |
                         FOREGROUND_BLUE | FOREGROUND_INTENSITY;
    /* set text and background color */
    SetConsoleTextAttribute(hConsole, color);
    return oldColor;
}

// further console operations please consult MSDN Library "Consoles and Character Mode support"
// also a complete demo project is in MSDN Library "Console sample (console functions)"

// go ahead and play with your computer's console...