

Université L'arbi en mhidi
Faculté des sciences exactes et des sciences de la nature et de la vie
Département d'informatique
Master01 : Vision artificielle
Synthèse d'images

Solution TP 04

Le code qui consiste à dessiner un cube est le suivant :

```
#include <SDL/SDL.h>
#include <GL/gl.h>
#include <GL/glu.h>
#include <cstdlib>

void Dessiner();

int main(int argc, char *argv[])
{
    SDL_Event event;

    SDL_Init(SDL_INIT_VIDEO);
    atexit(SDL_Quit);
    SDL_WM_SetCaption("SDL GL Application", NULL);
    SDL_SetVideoMode(640, 480, 32, SDL_OPENGL);

    glMatrixMode( GL_PROJECTION );
    glLoadIdentity();
    gluPerspective(70,(double)640/480,1,1000);
    glEnable(GL_DEPTH_TEST);

    Dessiner();

    for (;;)
    {
        SDL_WaitEvent(&event);

        switch(event.type)
        {
            case SDL_QUIT:
                exit(0);
                break;
        }
        Dessiner();
    }

    return 0;
}
```

```

void Dessiner()
{
    glClear( GL_COLOR_BUFFER_BIT | GL_DEPTH_BUFFER_BIT );

    glMatrixMode( GL_MODELVIEW );
    glLoadIdentity( );

    gluLookAt(3,4,2,0,0,0,0,0,1);
glBegin(GL_QUADS);

    glColor3ub(255,0,0); //face rouge
    glVertex3d(1,1,1);
    glVertex3d(1,1,-1);
    glVertex3d(-1,1,-1);
    glVertex3d(-1,1,1);

    glColor3ub(0,255,0); //face verte
    glVertex3d(1,-1,1);
    glVertex3d(1,-1,-1);
    glVertex3d(1,1,-1);
    glVertex3d(1,1,1);

glColor3ub(0,0,255); //face bleue
    glVertex3d(-1,-1,1);
    glVertex3d(-1,-1,-1);
    glVertex3d(1,-1,-1);
    glVertex3d(1,-1,1);
glColor3ub(255,255,0); //face jaune
    glVertex3d(-1,1,1);
    glVertex3d(-1,1,-1);
    glVertex3d(-1,-1,-1);
    glVertex3d(-1,-1,1);

    glColor3ub(0,255,255); //face cyan
    glVertex3d(1,1,-1);
    glVertex3d(1,-1,-1);
    glVertex3d(-1,-1,-1);
    glVertex3d(-1,1,-1);
glColor3ub(255,0,255); //face magenta
    glVertex3d(1,-1,1);
    glVertex3d(1,1,1);
    glVertex3d(-1,1,1);
    glVertex3d(-1,-1,1);glEnd();glFlush(); SDL_GL_SwapBuffers();}

```