

```
#include<stdio.h>
```

```
#include<GL/gl.h>
```

```
#include<SDL11/SDL.h>
```

```
int mousex;
```

```
int mousey;
```

```
char *key;
```

```
int width;
```

```
int height;
```

```
int bpp;
```

```
#define distance_sse(arg1, arg2)\
```

```
__asm__ __volatile__(\
```

```
    "movss %1, %%xmm0\n"\
```

```
    "movss %2, %%xmm1\n"\
```

```
    "movss %3, %%xmm2\n"\
```

```
    "movss %4, %%xmm3\n"\
```

```
    "movss %5, %%xmm4\n"\
```

```
    "movss %6, %%xmm5\n"\
```

```
    "subps %%xmm3, %%xmm0\n"\
```

```
    "subps %%xmm4, %%xmm1\n"\
```

```
    "subps %%xmm5, %%xmm2\n"\
```

```
    "mulps %%xmm0, %%xmm0\n"\
```

```
    "mulps %%xmm1, %%xmm1\n"\
```

```
    "mulps %%xmm2, %%xmm2\n"\
```

```
"addps %%xmm1, %%xmm0\n\  
"addps %%xmm2, %%xmm0\n\  
"sqrtss %%xmm0, %%xmm1\n\  
"movss %%xmm1, %0\n\  
:"=m"(distance) \  
:"m"(arg1[0]),"m"(arg1[1]),"m"(arg1[2]),"m"(arg2[0]),"m"(arg2[1]),"m"(arg2[2])\  
);
```

```
#define midpoint_sse(arg1,arg2)\
```

```
__asm__ __volatile__ (\
```

```
"movss %3, %%xmm0\n\  
"movss %4, %%xmm1\n\  
"movss %5, %%xmm2\n\  
"movss %6, %%xmm3\n\  
"movss %7, %%xmm4\n\  
"movss %8, %%xmm5\n\  
"movss %9, %%xmm7\n\  
"addps %%xmm0, %%xmm3\n\  
"addps %%xmm1, %%xmm4\n\  
"addps %%xmm2, %%xmm5\n\  
"divss %%xmm7, %%xmm3\n\  
"divss %%xmm7, %%xmm4\n\  
"divss %%xmm7, %%xmm5\n\  
"movss %%xmm3, %0\n\  
"movss %%xmm4, %1\n\  
);
```

```
"movss %%xmm5, %2\n"\n\n:"=m"(midpoint[0]), "=m"(midpoint[1]), "=m"(midpoint[2])\n\n:"m"(arg1[0]), "m"(arg1[1]), "m"(arg1[2]), "m"(arg2[0]), "m"(arg2[1]), "m"(arg2[2]), "m"(two) \n\n);
```

```
void GetInput(){
```

```
    SDL_Event event;
```

```
    while ( SDL_PollEvent(&event) ) {
```

```
        switch (event.type) {
```

```
            case SDL_MOUSEMOTION:
```

```
                mousex=event.motion.x;
```

```
                mousey=event.motion.y;
```

```
                break;
```

```
            case SDL_MOUSEBUTTONDOWN:
```

```
                SDL_Quit();
```

```
                exit(0);
```

```
            break;
```

```
            case SDL_KEYDOWN:
```

```
                key=SDL_GetKeyName(event.key.keysym.sym);
```

```
    }  
  }  
  
}  
  
void GenWindow()  
{  
  
    width=1024;  
    height=768;  
    bpp=16;  
    SDL_Init(SDL_INIT_VIDEO);  
  
    SDL_GL_SetAttribute(SDL_GL_DEPTH_SIZE,16);  
    SDL_GL_SetAttribute(SDL_GL_DOUBLEBUFFER,1);  
  
    SDL_SetVideoMode(width,height,bpp, SDL_OPENGL|SDL_FULLSCREEN);  
  
    printf("\n%d x %d @ %d Window Created.\n",width,height,bpp);  
  
    SDL_ShowCursor(0);  
  
}  
  
void RenderScene()  
{
```

```
register float ratio = (float)width / (float)height;
```

```
glClearColor( 0, 0, 0, 0);
```

```
glViewport(0,0,width,height);
```

```
glMatrixMode( GL_PROJECTION );
```

```
glLoadIdentity( );
```

```
glBegin(GL_QUADS);
```

```
glEnd();
```

```
SDL_GL_SwapBuffers();
```

```
}
```

```
int main(int argc, char *argv[])
```

```
{
```

```
    GenWindow();
```

```
do
```

```
{
```

```
    GetInput();
```

```
    RenderScene(); }while(1);
```

```
}
```