

P3 Lecture3

DirectX

- DirectX is quite complex
- DirectX is Massive (loads of functions)

We only have limited time, very limited, so this course is going to need some commitment from you in your spare time.

You are going to need to read up and attempt exercises and/or get stuck right into coding for the projects.

The best way to learn is to code something yourself.

You can come up with a simple game quite easily, even for your project. This will then determine what you need to do.

After determining what to do you then add parts of the game, building it up one stage at a time.

Each stage should be testable: The code should compile and run, you should be able to see the results.

For instance, my game:

Name: Top Turret

Concept: A gun turret that you rotate 360, enemies spawn randomly and move across the screen. If the enemies hit you, you die end of game. You get points for shooting the enemies.

View: 2D Top Down

What I need: Texture or bitmap for nice background, Sprite for turret, Input for turret controls, Sprite for enemy, sprite for bullet or laser beam, collision detection for the sprites, font and texture to display score and timer.

What I would like to add: Multiple enemy sprites, sounds for background, shots, collisions, power ups, method for saving game.

Way to work on this project:

- Start by initialising Direct3D
- Add background
- Load turret
- Input (controls) for turret
- Load one enemy that moves towards turret
- Add collision detection between turret and enemy
- Add ability for turret to fire, turret collision with enemy should remove sprite
- Repeat loading of enemy
- Add fonts/text for the scores
- Randomise number of enemies on screen and directions they move in

DirectX tutorials and books

- There are many available
- Most aren't up to date with DirectX 9.0 or they cover Managed DirectX
- Coding standards differ immensely

- Every sample I have seen has used a different method and layout

Due to limited time, references, tutorials and other people's code should be a big help to learning DirectX. You must make sure that DirectX versions are correct (we are using DirectX 9.0, without the summer update), and that you understand what is going on.

How you choose to implement your project is up to you:

- If you use classes or structures
- How it is broken down into source and header files

All these apply to the code you find online as well, each person having their own methods and style. Pick one style that you are comfortable with, as long as the coding standards are good, and stick with it. Do not mix and match styles from code found online and/or in books (or even tutorials) it will make your code harder to understand.

The MSDN

- Microsoft Developer Network
- Contains reference information on all the DirectX methods, interfaces etc
- Valuable resource
- Found at msdn.microsoft.com

This resource can be invaluable in helping you code and decipher someone else's DirectX code.

If you see an unknown method then by search using the method name on the msdn you will be presented with the method, its parameters, return and additional information.

A lot of the methods and interfaces in the example files provided and those covered in tutorials are defined on this website.