Spring 2012

Game Programming

305890-1
Spring 2012
3/5/2012
Kyoung Shin Park
Multimedia Engineering
Dankook University

Course Information

- ❑ Course
  - Game Programming (305890-1)
  - Spring 2012, 3 credits, 3 hours
  - Course hour: Monday 2:20-5:10
- ❑ Instructor
  - Kyoung Shin Park
  - kpark@dankook.ac.kr
  - 010-8636-1960 (mobile)
  - The Third Science Hall, Room 417
  - Office hour: Monday 1:00-2:00
- ❑ Prerequisite courses
  - HCI Programming I (Data Structure, C/C++ Programming), Graphics Programming

Purpose

- ❑ This course introduces the fundamental concepts of 3D computer game programming.
- ❑ Students will learn and practice XNA programming basics, game graphics programming techniques, the tools needed for game production.
- ❑ In this course, students will form project groups to create a simple computer game using XNA to develop game design skills.

Text Book

- ❑ Microsoft XNA Game Studio 4.0
  - http://msdn.microsoft.com/en-us/library/bb200104(v=XNAGameStudio.40).aspx
- ❑ Reference Book
  - Core Techniques and Algorithms in Game Programming, Daniel Sanchez-Crespo Dalmau

Evaluation

- Attendance : 20%
- Midterm Exam : 30 %
  - There will be a midterm exam that covers all the subjects discussed in the classroom.
- Individual Assignment : 20 %
- Term Project : 30%
  - Proposal 5%
  - Midterm progress report & presentation 10%
  - Implementation 5%
  - Final report & presentation 10%
- Class Participation & Attitude: extra 10 %

Schedule

- 3/05 : Course Overview
  Introduction to Kinect
- 3/12 : XNA Preparation
  Vector & Matrix
- 3/19 : Transformation
  Euler, Axis-Angle, Quaternions
- 3/26 : Initialization
  Input
  Term Project Proposal Presentation
- 4/02 : Rendering Pipeline
  Drawing
- 4/09 : Color
  Lighting

Schedule

- 4/16 : Texturing & Blending
  Stencil
- 4/23: Midterm
- 4/30: Term Project Midterm Presentation
- 5/07: Sound
- 5/14 : Mesh
  Mesh Hierarchy Animation
- 5/21 : Terrain Rendering
- 5/28 : 석가탄신일 (no class)
- 6/04: Particle System
  Picking
- 6/11 : Game Physics
- 6/18 : Term Project Final Presentation

Exams

- Midterm Exam
  - Chapter ~Blending
  - 2-hour close-book exam

Programming Exercises

- Programming Exercises
  - 5~10 Assignments
  - Turn in all your source codes, executable, short report containing the snapshot

Term Project

- XNA Game Development
- Students will work on a semester-long project that will comprise a major part of the class grade.
- Students are encouraged to work on a project related to your own area of interest.
- Projects can be done as groups of two or three.
- Also, the project report should indicate to which portions of the project each member contributed.
- You group project blog will also help monitor your steady progress across the semester.
- Also, the final project report should indicate to which portions of the project each member contributed.

Term Project

- Project proposal & 5-min presentation (3/26) 5%
  - Project groups will form (2 or 3 students in each group)
  - Once a group is form, send me email
  - 2~3-page (single-space, 10-point font) report
- Project progress report & presentation (4/30) 10%
  - Implementation progress
  - 10 minutes presentation
  - 3~5-page (single-space, 10-point font) report
- Project implementation & Blogging 5%
- Project final report (6/11) 10%
  - 10-20 minutes in-class presentation & demo
  - 10-page (single-space, 10-point font) report
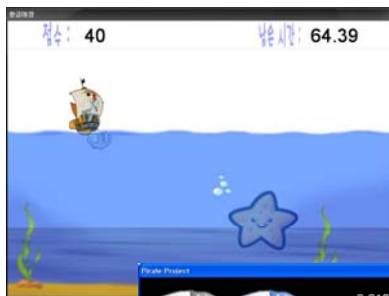 - Turn in all your source codes & executable

Term Project

- Data Set
  - A collection of 3D models (models.zip 135MB)
  - A collection of textures (textures.zip 17MB)
  - A collection of sound effects (sounds.zip 57MB)

Spring 2007 Students' Term Project

황금어장

체스 (2인용 네트워크 버전)

DirectX9 + Joystick

해적

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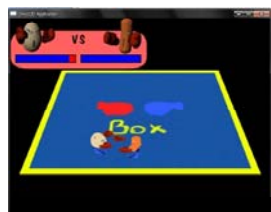## Spring 2007 Students' Term Project

DirectX9 + Joystick

리듬플러스

토이박스

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Spring 2008 Students' Term Project

Food Fighter

미로게임

DirectX9 + Joystick

두더지게임

Save the Spy

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Spring 2009 Students' Term Project
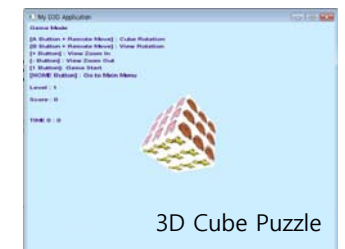

Top Gun

Gone

DirectX9 + Wiimote

Penguin Gogossing

3D Cube Puzzle

Spring 2010 Students' Term Project

Snow Battle

Gladiator

DirectX9 + Shader

Spring 2011 Students' Term Project

XNA + Kinect

Food Eating

Announcement

❑ Class blog:
- http://dis.dankook.ac.kr/lectures/game12/

Days 1 - 10
Teach yourself variables, constants, arrays, strings, expressions, statements, functions,...

Days 11 - 21
Teach yourself program flow, pointers, references, classes, objects, inheritance, polymorphism, ...

Days 22 - 697
Do a lot of recreational programming. Have fun hacking but remember to learn from your mistakes.

Days 698 - 3648
Interact with other programmers. Work on programming projects together. Learn from them.

Days 3649 - 7781
Teach yourself advanced theoretical physics and formulate a consistent theory of quantum gravity.

Days 7782 - 14611
Teach yourself biochemistry, molecular biology, genetics,...

Day 14611
Use knowledge of biology to make an age-reversing potion.

Day 14611
Use knowledge of physics to build flux capacitor and go back in time to day 21.

Day 21
Replace younger self.

As far as I know, this is the easiest way to "Teach Yourself C++ in 21 Days".

http://adt.soup.io/post/47737983/Teach-yourself-C-in-21-days