Game Development

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Learning Goals

- Become proficient with C++
- Understand the building blocks of video games
- Get into data driven programming
- Understand isometric perspective
- Develop debug tools
- First glimpse into GUI programming

Resource handling like Quake to proper access FS (and spawn mods like this)

What we will learn

- Resource Management
- Load / Save
- Loading maps (XML)

Map loading and rendering || Diablo 2

What we will learn

- Orthographic vs. Isometric
- Meta information on maps
- Pathfinding!

Max Payne

What we will learn

- FPS control
- Game Logic Time control
- Entity Management

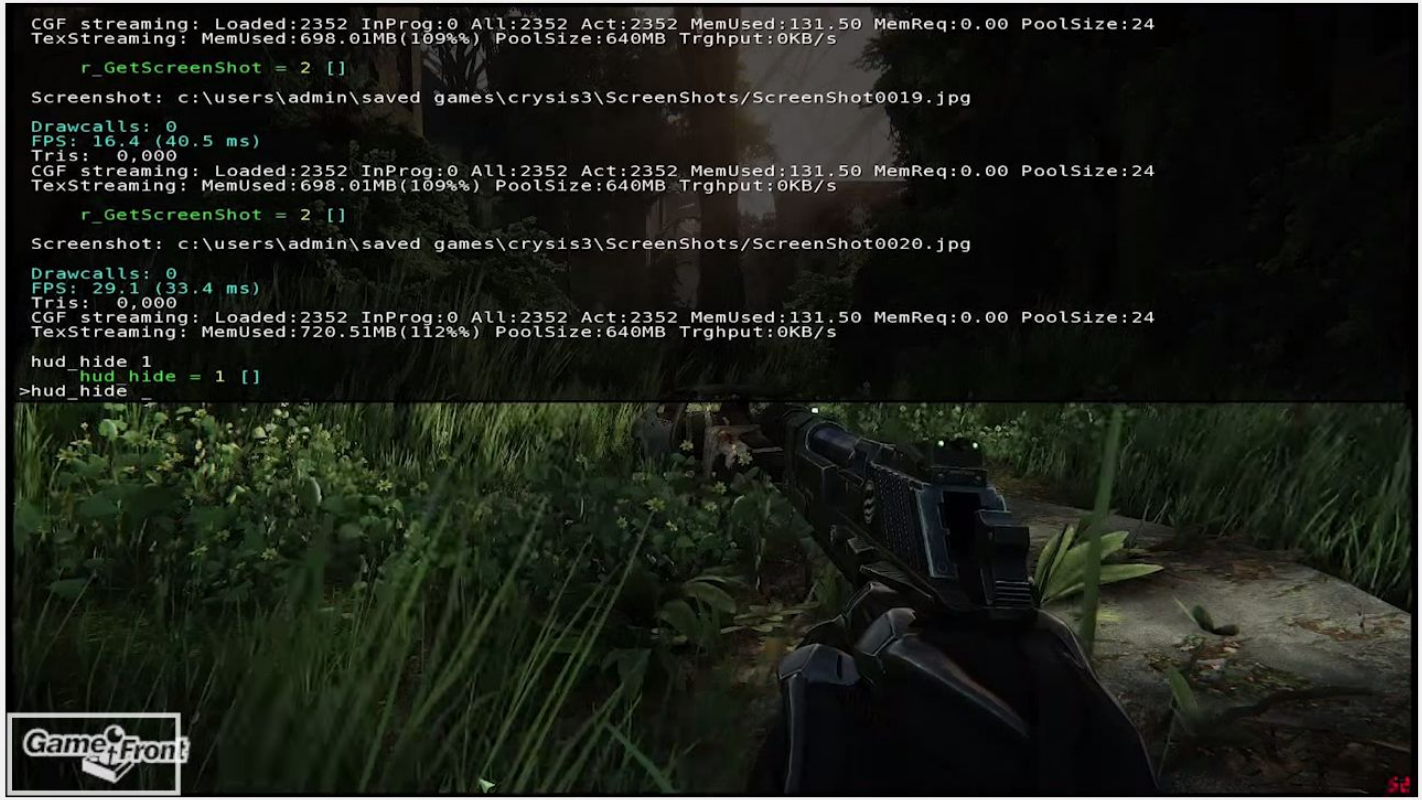
GUI - WoW


Next Pact of the Darkfallen 17.9
Unsuccessful Attempts until Retreat: 20 of 20
Spell is not ready yet.
Spell is not ready yet.
Spell is not ready yet.
Swiftmend Ready!
12:07AM
MAIL: 0/1
Chill of the Throne
Concentration Aura
Devotion Aura X
Fire Resistance Aura V
Heroic Presence
Leader of the Pack
Master Shapeshifter
Moonkin Aura
None
Retribution Aura VII
Totem of Wrath
Tree of Life
Trueshot Aura
Windfury Totem I
Wrath of Air Totem
Gift of the Wild IV 55:20
Dalaran Brilliance... 55:00
Well Fed 54:54
Prayer of Spirit III 54:39
Prayer of Fortitud... 54:38
Greater Blessing ... 24:32
Greater Blessing ... 24:22
Greater Blessing ... 24:07
Greater Blessing ... 23:54
Prayer of Shadow P... 14:41
Commanding Shout III 1:48
Soothing x8 0:14
Replenishment 0:13
Energized x8 0:09
Inspiration III 0:08
Memories of Love 0:06
Rejuvenation XV 0:01
REJUVENATION 2.0S
MEMORIES OF LOVE 6.5S
ENERGIZED (8) 9.6S
SOOTHING (8) 14S
19.1K/26.5K
7886/25.5K
Range Check (10 yd)
Vemi
Ariya
REJUVENATION 5.6S
87.2% SHADOW BOLT 0.1 / 1.6 80 ETERNALPAIN
BLOOD-QUEEN LANATHEL 38.1
[G] [Kyouko]: man
Shadows amass and swarm around Gnomedorei!
[G] [Kagami]: and people were just morons
[G] [Kyouko]: if u wipe the raid like 5 times in a row
[G] [Kyouko]: u should be on that list
Blood-Queen Lana'thel yells: Just a taste...
Blood-Queen Lana'thel Pact of the Darkfallen on Illustrious, Rofnik, Nakatsu
HitsMode: Unknown Spell School: 96
GUILD: 33 FRIENDS: 3 ARMOR: 10% 1041G 99S 0C 94MS 9FPS
Healing Done
1. Inarei 2340797 (10380.0, 18.5%)
2. Chromosome 2114995 (9279.1, 16.8%)
3. Ariya 2004485 (6917.1, 15.9%)
4. Colb 1834072 (6226.0, 14.5%)
5. Nakatsu 1426336 (6378.1, 11.3%)
6. Lance 998698 (4492.6, 7.9%)
7. Rofnik 258477 (1145.8, 2.0%)

What we will learn

- GUI:
  - Labels
  - Buttons
  - Text Input

Quake style console || Crysis console



What we will learn

- Performance analysis
- Development console
- Cvars for configuration
- Tweak menu

Evaluation

First exam:

- Counts as **20%**
- October 13th / 14th
- *Resource Management*
- *XML Parsing*
- *Map Rendering*

Second exam:

- Counts as **20%**
- November 15th / 16th
- *Pathfinding*
- *Time control*
- *Entity management*

Evaluation

Third exam:

- Counts as **20%**
- December 15th / 16th
- *GUI: Labels*
- *GUI: Buttons*
- *GUI: Text Input*

Final exam:

- Counts as **40%**
- January 9th - 18th

Revaluation exam:

- Counts as **100%**
- January 30th - February 3rd

Rules

- Work is **individual**
- … but teamwork is important, share and discuss!
- Code is expected to be:
  - **Clear**
  - **Consistent**
  - **Optimal**

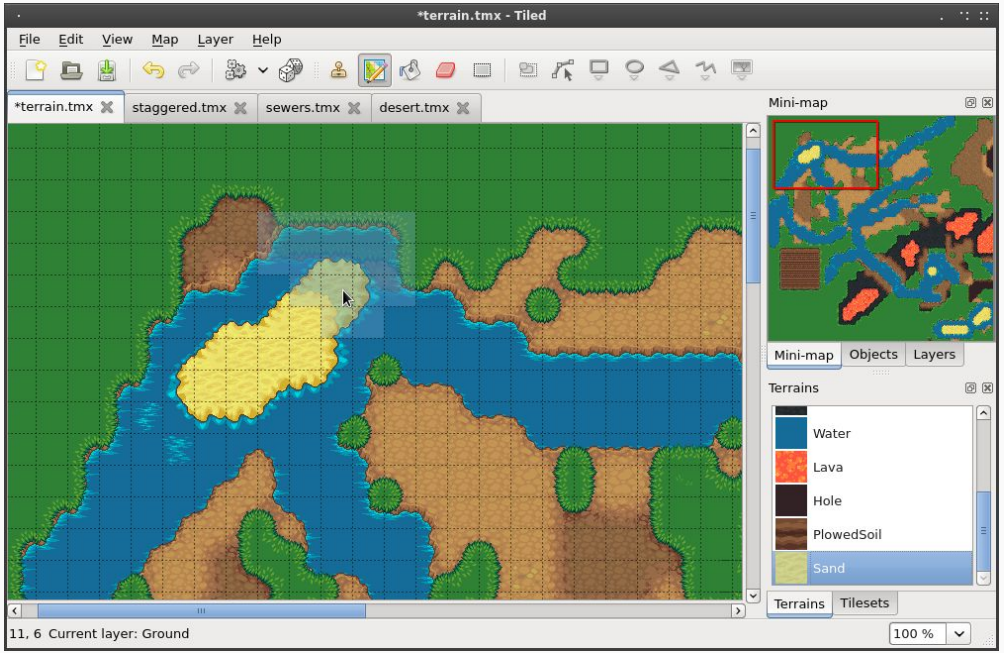
Rules

- Exploration is encouraged, bring your ideas!
- Homework is the main learning tool
- During exams:
  - You have all your code available
  - No internet connection
  - No teamwork :)

Tools

We will build on last year code structure:

- Visual Studio 2013
- Github
- Tiled
- Dr. Memory



Observations

- We will learn coding for video games
- Exploration and work at home is key
- You will start understanding the games you play
- All those building blocks will be used on **Project II** Subject next semester
- Have fun! :)
- https://www.youtube.com/watch?v=nxtMnaDp6M4

Homework

Review C++ material from Programming II

Class, Encapsulation and Polymorphism

1. Create a new vec3 class
2. Create a method in linked list to add its data to a dyn array
3. Create a method in the dyn array to add its data to a linked list