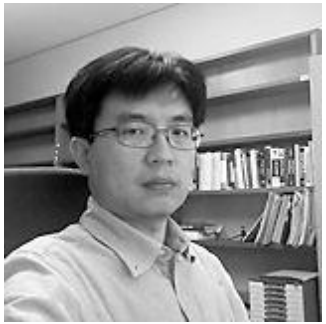
Game Project Capstone Design I

Introduction

Basics

- Time :
  - Tue 10:30~13:15
- Class :7418
- Class homepage : http://ctl.kmu.ac.kr/
- Textbook
  - No textbook required
  - I will provide powerpoint slides

Who am I? Dr. Mankyu Sung



- Professor, KMU
- Department Chair of Dept. of Game & Mobile / Dept. of DigiPen Game
- Advisor of Epitech/KMU program
- Education
  - B.S , Computer Sciences, ChungNam National Univ., Korea
  - M.S, Ph.D , Computer Sciences, Univ. of Wisconsin-Madison, USA
- Experiences
  - 1995-2000, 2006-2012 : Senior Researcher, ETRI
  - 2012~present, Assistant and Associate Professor, KMU
- Research Fields
  - Computer Graphics, Computer Animation, HCI
- Telephone : 580-6684
- E-mail : mksung@kmu.ac.kr , mksung89@gmail.com
- Office : 7423

Goal of Game Project 1

- One of the most popular courses for Epitech students.
- Learn about the game development process
  - Game designing / Writing GDD (Game Design Document)
  - Game Development as a team project
    - Come up with a project idea, make a schedule and solve problems together
    - You are allowed to use any libraries and any languages.
      - OpenGL, DirectX..
      - SFML, Box2D..
      - Processing, Arduino, C/C++, Java, JavaScript, Lua…
    - You can use any game Engines such as Unity3D and Unreal.
- This course is not for learning how to use Unreal or Unity3D

About Using Game Engine..

- Fast & Easy
  - You can make your games quite quickly. There are so many resources out there you can use. (asset store, 3rd party plug-ins)
- Not always good for CS college students.
  - College students have to know about “fundamentals”, not just skills of using some software tools.
    - Rather than knowing how to use GUI of particle system plugin or extension of Unity3D, you must have deep understanding on how the particle system works and how to implement it from the scratch.
- However, since we have only 12 weeks to complete the project, building a game from the scratch takes too much time.

Grading

- Grading policy
  - Attendance: 10%
    - If you miss more than 10 classes, then you are going to fail the class automatically.
  - Quality of GDD : 20% (subjective of peer review)
  - Project : 70%
    - Project includes game design document, progress checkup, source code submission, poster and video clip.
- 4 grading criterias for team project grading
  - Creativity (25%)
  - Completeness (25%)
  - Fun (25%)
  - Technical Challenge (25%)

Team project : 4 steps for grading

- Project grading is very difficult job
  - There is no clear-cut between good and bad in games
  - There are so many different themes and styles

Self Grading	Classmates grading	Professor Grading
10%	60%	30%

+

Teammate Grading
-10%~+10%

- Self-grading : you have to grade your own project
- Classmate grading : Other teams will grade your projects
- Professor grading : Professor will grade your projects
- Teammate grading : peer-grading

Grading among teammates

- Because it is a team project, all team members will likely get a similar grade.
- However, it may be different
  - Class attendance
  - Different contributions to the game
    - A single student seems to do everything
- If your game fails, it is all team members' responsibility
  - No exception
    - I did my part, but all other team member didn't do it -> It is also your responsibility make other team member do their jobs
- If you have a complaint about the team members, you must let me know beforehand.

LLMs (Large Language Models)

- You are allowed to use generative A.I for designing games.
- Get some help from AI

2D or 3D game?

- 2D game
  - Easy to implement
  - Not realistic, in general
  - You need to put a lot of effort to design a creative game
  - Not many options in genre (Puzzle, RPG, platformer, defense…)
- 3D game
  - Hard to implement
  - More immersive and aesthetically beautiful
  - More flexible in choosing game genre (FPS, Horror, car driving, ….)

Project Budget

- Each team has around US $100 budgets (100,000 Korean won, more specifically)
  - Purchasing assets from Asset store
  - You don't need to use them all (Actually, there are many teams that never used it)
  - You are allowed to buy graphical/sound/UI assets only.
    - For example, there are a lot of AI or game-templates in asset store, but you can't buy them.
- How to buy them?
  - Send me a link of assets by email
  - You must buy them at once (You are given a chance only one time)
- We have A LOT OF ASSETS available. Please try to use them before you buy new assets.

Rough Schedule

- Game Designing (4 weeks)
  - Game Design (4 weeks)
    - I will teach about the Gama Designing for 4 weeks.
    - Assignment : Make design document (10 pages)
- Team Project(12 weeks)
  - Based on the game design document, you have to implement your game
    - Game Proposal (You have to present your project idea to all other students)
    - Weekly meeting
      - I will meet each time every week to check your progress
      - You must submit your weekly report on CTL.
  - Alpha testing in the middle
  - Weekly meeting with me
    - Progress check-up
  - Final Presentation (Final week)
  - Wrap up
    - Source code submission
    - Make a video clip

Teams

- Forming your team is very important
  - All your works must be done as a team member
  - Job assignment is very important !
    - Do not burden too much work on a single student
  - I will keep talking with each team during the class
  - Each team must have 4-5 members.
    - 2, 3 or 6 members needs special permission

LET ME KNOW YOUR TEAM BY 9/10 (Sunday)
SEND ME AN EMAIL (List of your teammate's names and id#)
(mksung@kmu.ac.kr or mksung89@gmail.com)

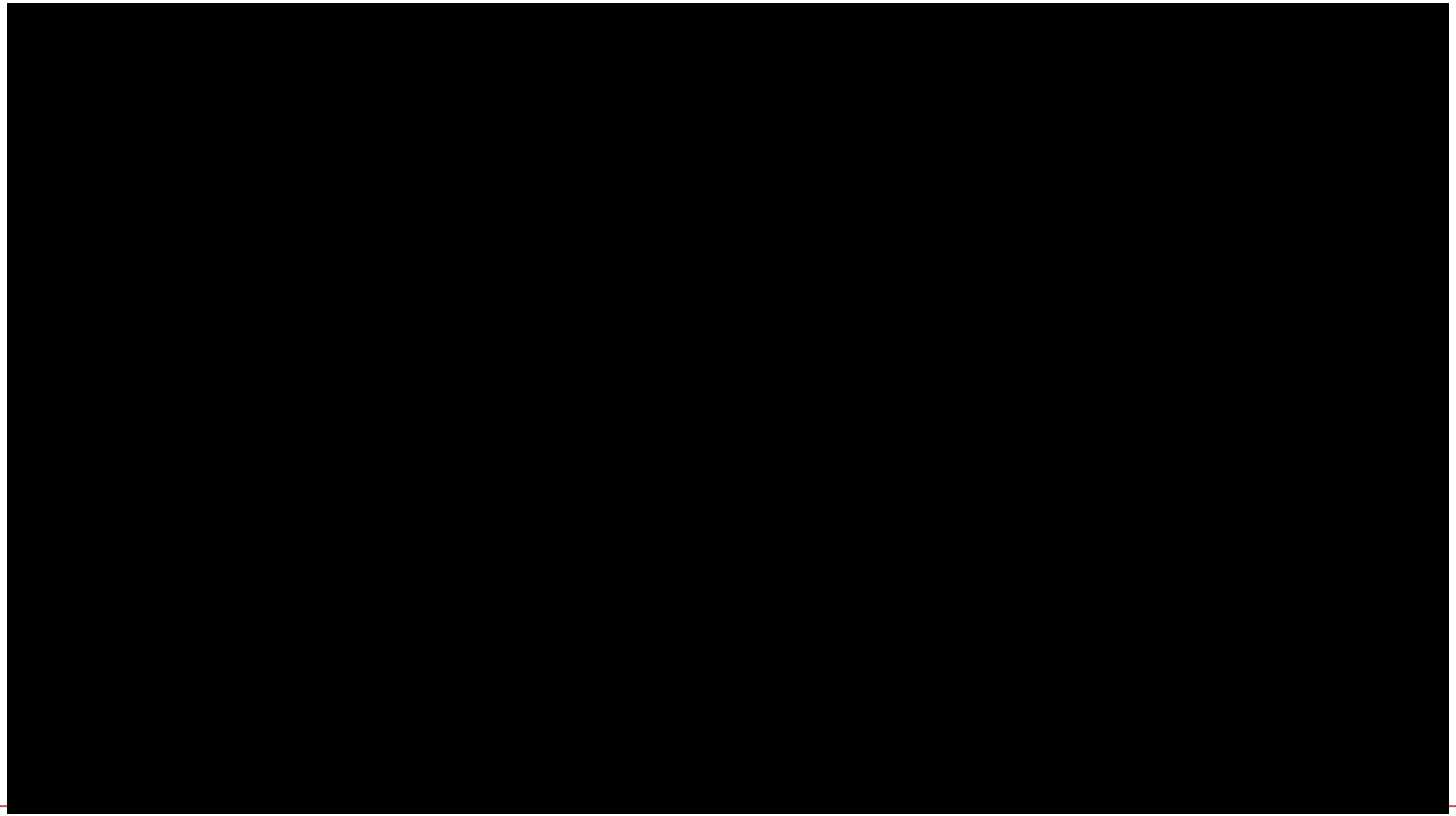
During the team project for face-to-face lectures

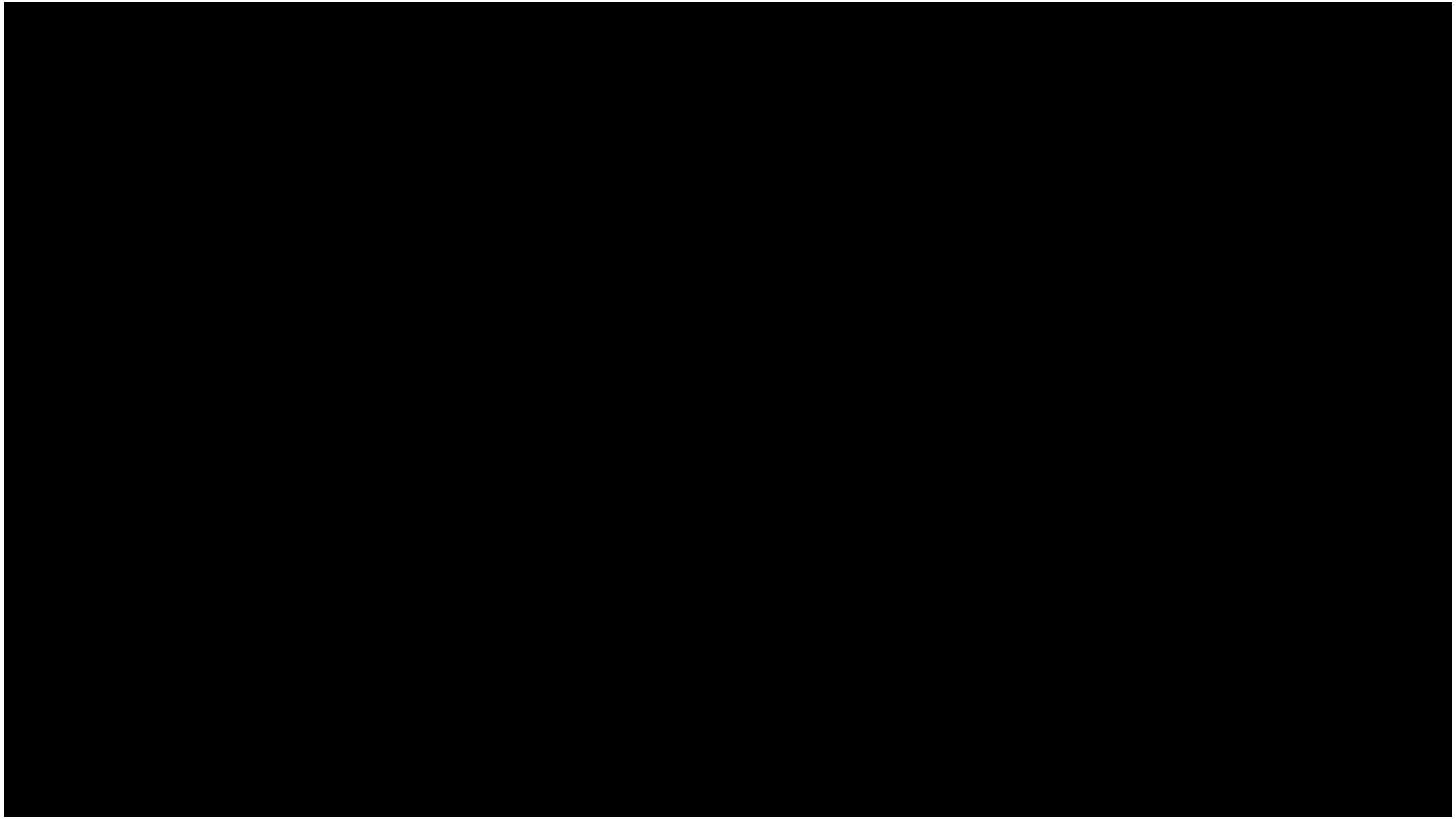
- Your team members must sit down together during the class.
- Your team must talk and discuss together about game ideas.
- Your team must write a game design document together.

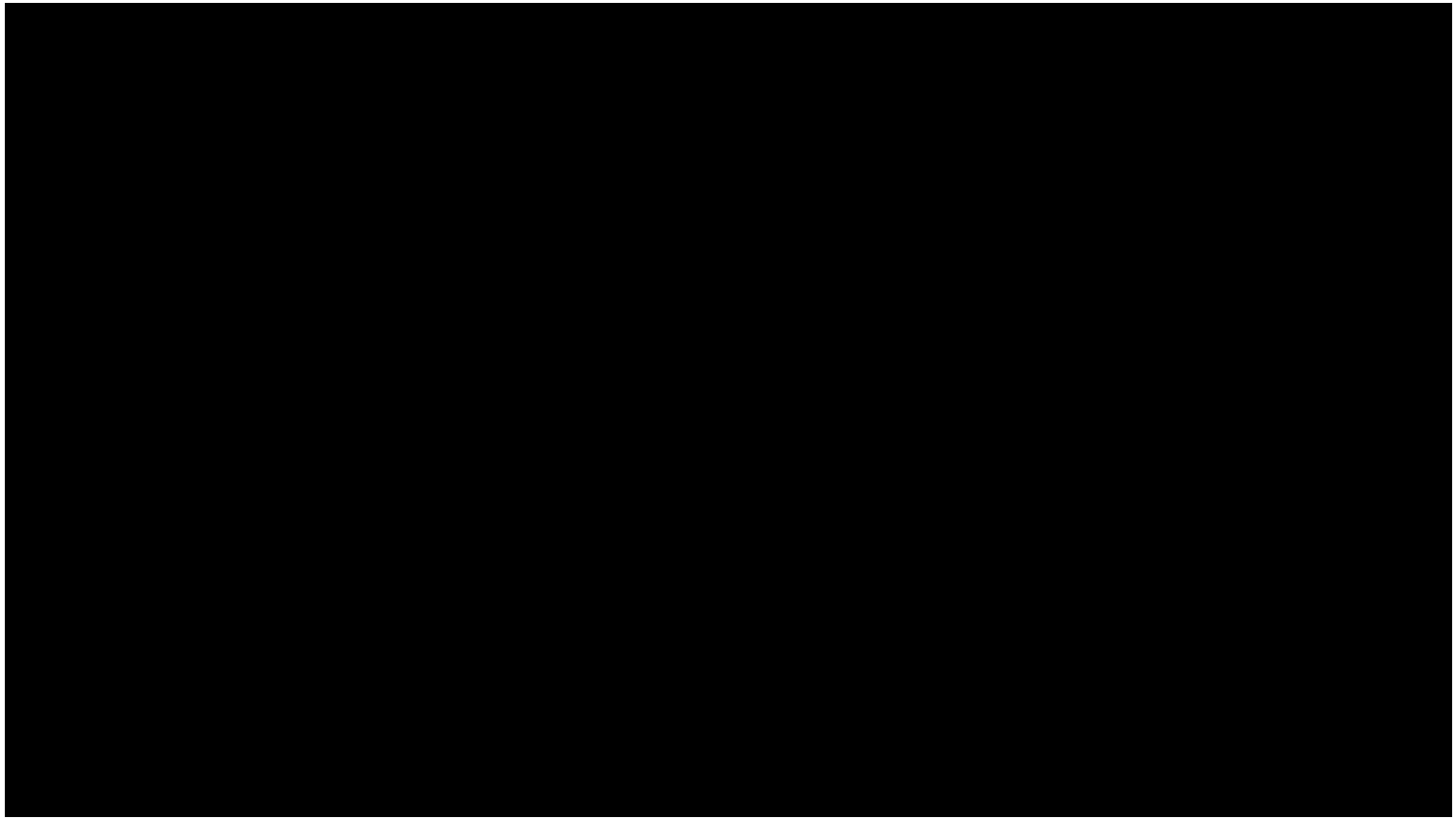
My roles of this class : *Facilitator*

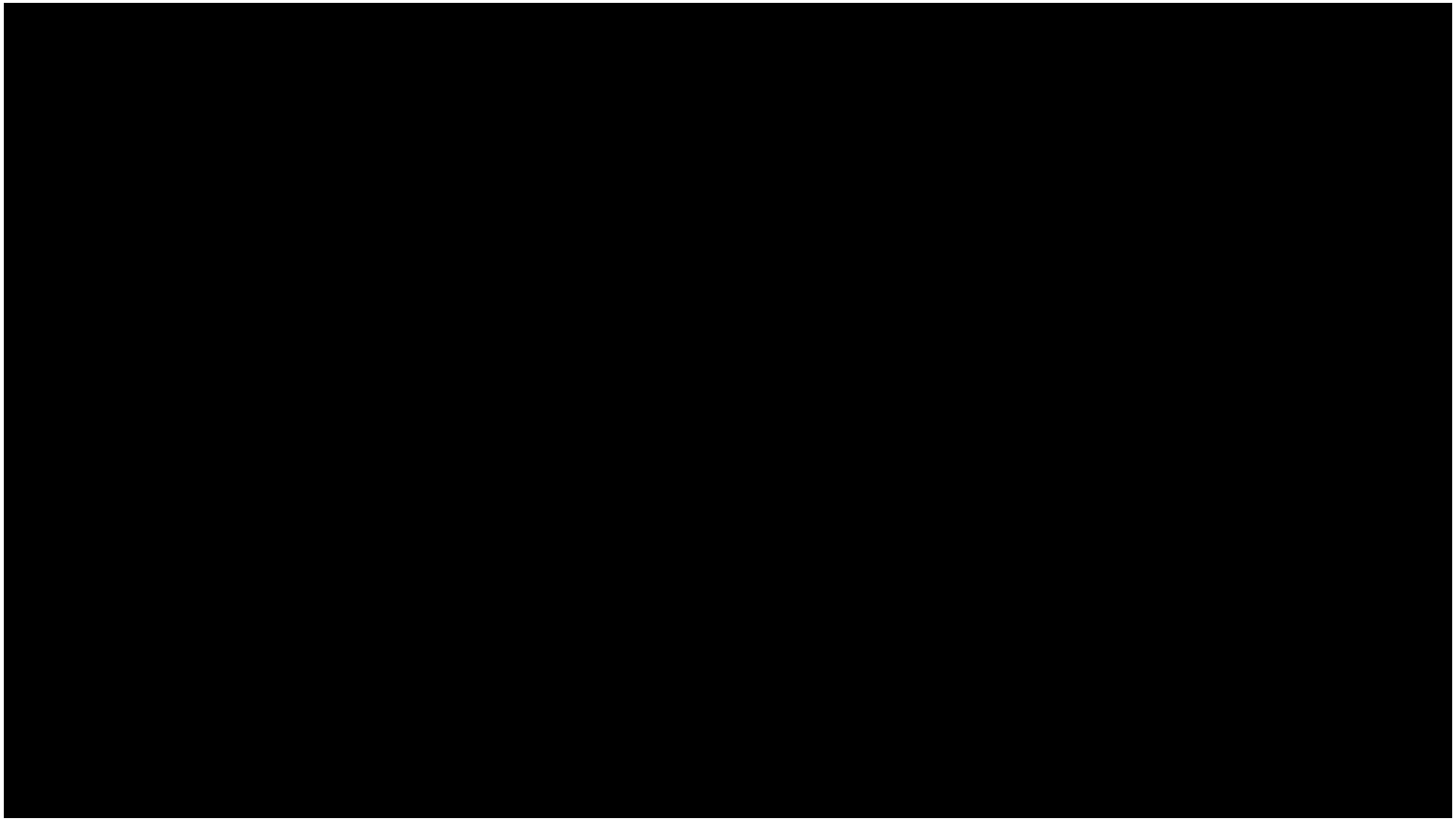
- I will give you lectures about game design theory
  - How to write a GDD
  - How to design a good games
- After a month of teaching, I will give you full class time for working on your own project
  - However, you must attend the class and do your project with your teammates
  - I will have a regular meeting with each team during the class
  - If you have some problem, I will guide or advice you how to tackle the problem. (I may not give specific answers)
  - I will check your progress of your project

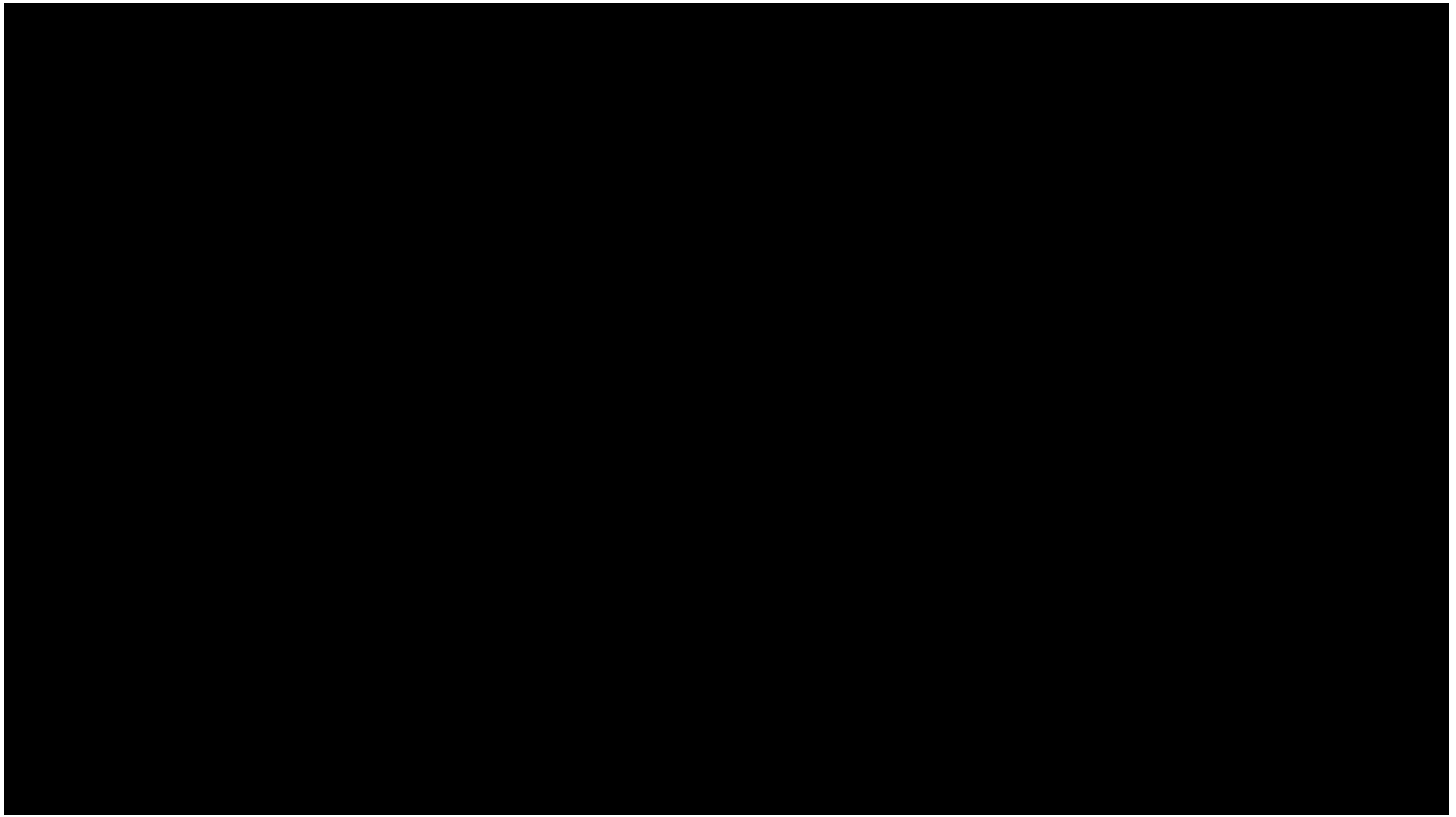
Sample Projects

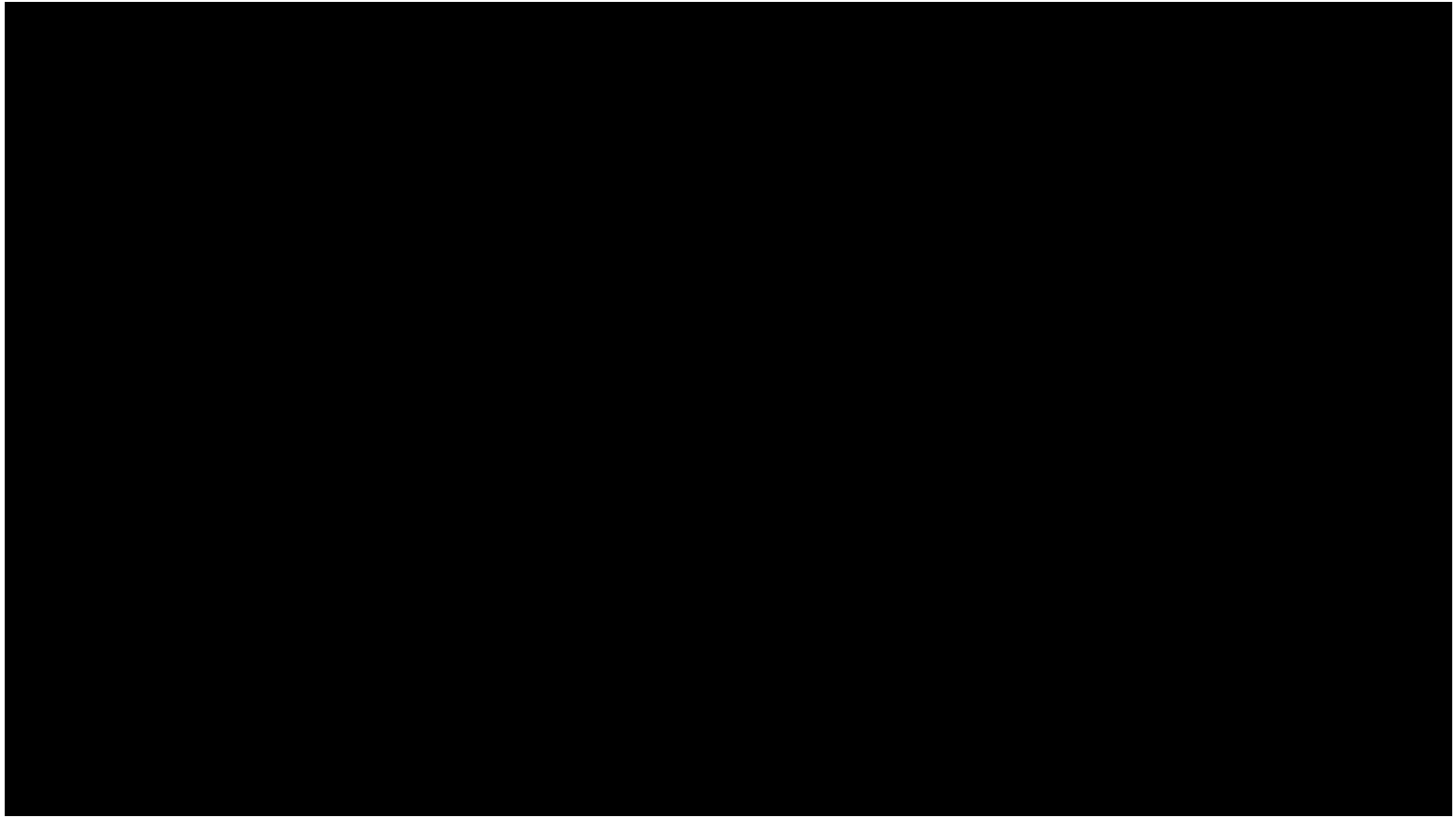


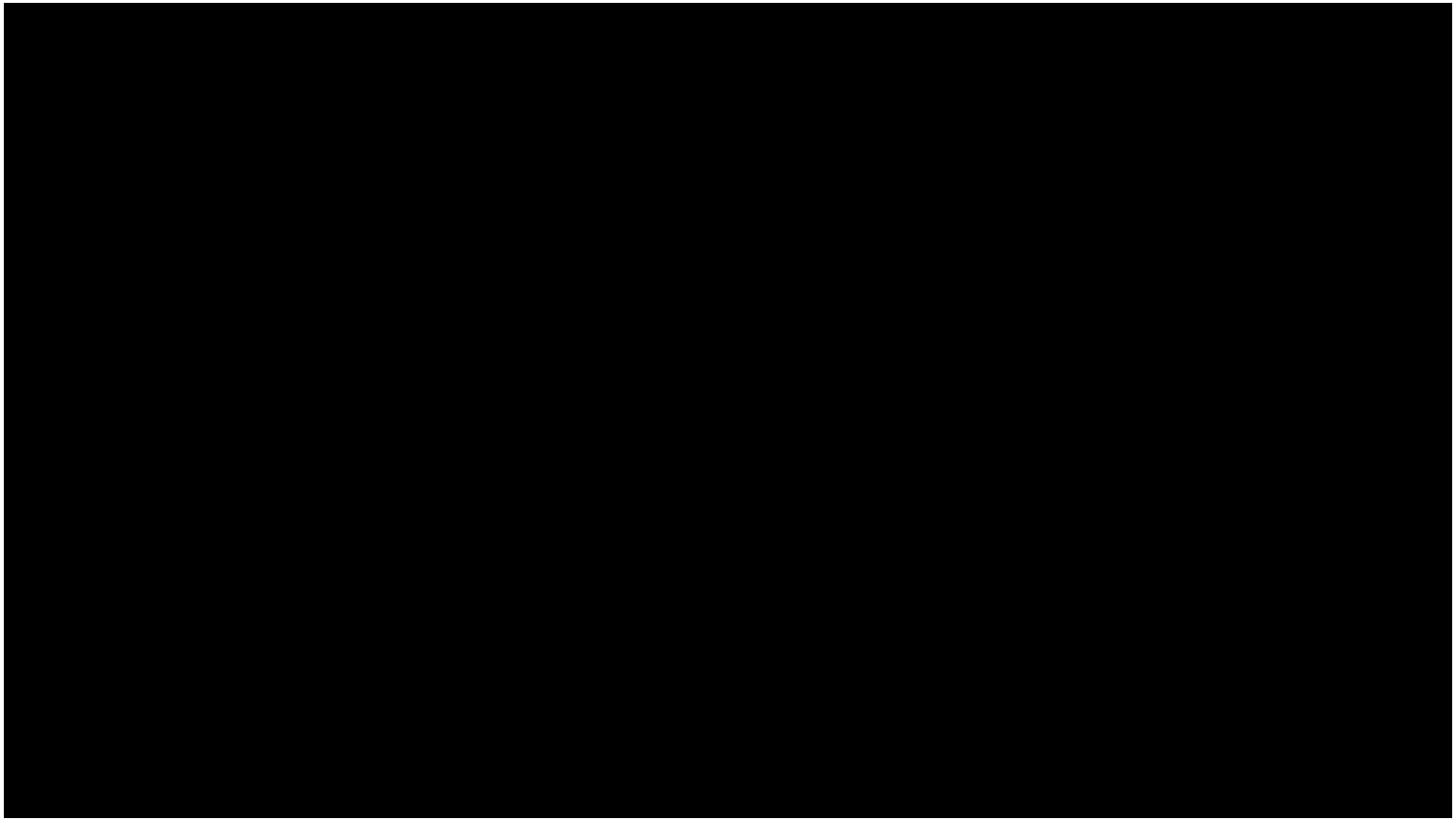












Exhibition

- All your projects was be exhibited on Department Exhibition on December.

Exhibition

Exhibition

Exhibition

Exhibition