# CSE165/ENGR140: Final Project

Your final project will be a group project consisting of 3 members. There will be a presentation of the project on **Tuesday May 10** during the scheduled final exam time. The presentation will be very short (about 5 min) and you will simply present your project with a live demo. Each group should choose one topic among the topics given below.

## What to submit

In addition to the final presentation you are also required to submit the following materials:

1. Report – written group report of your project, at least 2 pages long (PDF format).
2. Source code – the source code you developed for the project (archived directory).

Create a single archived file (zip,7z) that contains all of the above. Add it to CatCourses under the Final Project assignment entry. Only one member of the group needs to submit the material.

## Content of presentation and report

The format of the presentation and of the final report must discuss the following parts:

1. Project description – a short description of the project topic.
2. Members – description of how each member contributed to the project.
3. Implementation – short description of your source code.
4. Lessons/Conclusions – what are the lessons you learned and you want to share with your colleagues.

## Important Dates:

- **Friday April 1 11:59PM** – submission of group members and project proposal.
- **Monday May 9 11:59PM** – deadline for uploading to CatCourses your project materials.
- **Tuesday May 10 3:00PM** – project presentations (Official final exam schedule).

# Grading:

50% - minimum requirements of the specific project

20% - overall quality of the results

20% - quality of the final presentation

10% - quality of report

(Grades may be different per member if no sufficient contribution is seen for a given group member.)

# Project topics:

## 1. Video Game

Use the QT and OpenGL to develop a video game. We do not expect you to learn/explore advanced graphics concepts that what has been done in labs. You can do something very interesting with 2D primitives. Here are some examples of games you can implement: space invaders, pac man, brick out, tetris, etc. As a group project, one member will have to be the “integrator” who will implement the main game logic, and the other members can be divided to work on many other tasks: to write classes for drawing the various elements of the game, for drawing the environment of several levels, designing classes that will compute the behavior of the needed game entities, etc. Even the simplest 2D game can be as complex as you’d like in terms of features and art.

***Minimum Requirements:***

a) The game has to have at least one object controllable by the user (multiple players ok).
b) At least one object will move autonomously according to the game logic.
c) The user must be able to interact with the autonomous object(s) in order to play the game.

## 2. Useful App

Use QT to develop a useful app. You can make up your own or implement one of your favorite Android or iOS apps for PC or Mac. Examples include: Paint, Todoist, Sticky Notes, Graphing Calculator, etc.

***Minimum Requirements:***

a) User must be able to input data via a graphical user interface
b) Data must be processed with one or more algorithms
c) Data must be output in a useful format (e.g. tables, graph, charts, etc)