CSE 170 – Computer Graphics - Final Project (Project 2)

Project Demonstration: May 11 Thu, 11:30AM-2:30PM   KOLLIG 209

Project Submission at CatCourses: 1h before the demonstration time.

1. Instructions

Your final project has 3 main parts to be observed:

- **1) Show your first results on the Checkpoint 1 lab (worth 10 points):** At the May 1 and 4 labs you will have to define your chosen topic and you will also have to show some first results and explain how you are planning to accomplish the project. It is ok if you do not have yet much to show but you have to show something already done (some application running) and demonstrate that initial steps have already been implemented. Your project will most likely be in group and each member will have to present some initial results and explain exactly what part each group member is expected to do. You will also need to answer 4 specific questions that will help us with the grading (more details are given below in Section 2):
  a) What is the overall goal of your project?
  b) What are the "interesting features" you/your group will plan to accomplish?
  c) What will be the individual contribution/task of each member?
  d) Where and how will you use a curve or surface topic in your project?
  In a group project the tasks above are expected to be equally divided among all the group members. Note that the TA will have to agree that your proposal is reasonable before you move forward.

  Typically, groups will have 2 or 3 members. Individual projects are possible, but please no groups with more than 4 members (unless you have a very good reason for it). Plan to use the results of your project to showcase your abilities in job applications.

- After Checkpoint 1 we will have the groups and topics defined. We will use the features you agreed to develop for the grading, where we will check how well the features were implemented. If for any reason the plans for your project (or group membership) change, please communicate immediately to your TA, who will make sure we know what to expect from each project.

- **2) Presentation:** At the demonstration day you will run and explain your project to the class. You can use your own laptop or any other computer in the room, just be sure your application will run fine in the presentation day. I will bring my laptop computer, which can be used by anyone for presentations. Note that we will not be in a computer lab at the presentation day. At the end of the presentations there will be an election for the best projects (and maybe a prize!)

- **3) Submission:** The submission has to include: a)report, b) representative image, and c) your implementation code.

  a) Report: you will have to complete a simple report to be included in your submission. The report template is given at the end of this document. It has to be submitted together with your project implementation. For group projects every member has to submit a report. The report is to be filled individually by each group member.

b) Representative Image: as part of your submission, in addition to uploading your code and report, you will also be required to supply one .png or .jpg snapshot of your project. This image should be the best representative image to highlight your project. We will later organize a web page with all pictures. Please name your picture in the following format:

`proj2_[last name of a member or project name].jpg/png`

c) Implementation: all your implemented code has to be zipped/7zipped and uploaded to CatCourses in a way that we can recompile your project ourselves; so be sure no files are missing. Before submitting, test to unzip your package in a different directory in order to make sure it can still be compiled with no errors. The project code can be submitted by only one of the members of the group.

2. Project Topics

A few suggested topics were given so that you have some ideas of possible topics for you project. You may also specify your own project topic, or continue and extend your first project. Again, for any topic that you choose you will have to tell us at checkpoint the following information (with the 4 questions mentioned before):

a) The overall goal of your project and how you intend to achieve it.

b) You will identify at least 3 significant and interesting features that you, as a group, are going to implement in your project. You will explain to us what these features will be and we will later grade how well you implemented these features. To have an idea of how these features can be specified, see the features identified in the given example projects. The number and complexity of the "features" will be adapted according to the number of members in the group. In a 3-member group we expect each member to be responsible of 1-2 significant features.

c) Each member is expected to equally contribute to the project. Consider using a collaborative repository to help code integration (but this is not necessary). Usually groups are organized with one member responsible for compiling the whole project, and each individual member responsible for their own specific parts, which should have well-defined interface functions to connect with everyone else. Naming filenames with leading letters specific to each part is also very helpful.

d) As you already know, your project will have to make some interesting use of a curve or surface. This requirement is quite open and can certainly be included in any project you choose; for example, you may implement a flying camera that moves along a Catmull-Rom interpolator in order to have a moving/flying view of your scene.

3. Grading

10% - checkpoint 1 presentation (5% for project and group definition, 5% for initial results)
10% - the final presentation/demonstration of your project works and is interesting
5% - the correct submission of the project and the report with nothing missing
20% - the main goal of the project was achieved
30% - good implementation of the (at least) 3 features identified by you
10% - curve or surface is included and works well
15% - overall quality of your project

4. The Report

As explained above, you will have to write and submit a report together with your project. The report must include exactly the items below. Just answer each of the items using any text editor and submit the completed report as a file together with your project. A few sentences per question should be enough. For group projects each member has to individually submit a report.

The sections below also include a few questions for helping CSE170 to improve: please also answer these questions! (Note: this report is not anonymous, but we will not share it with anyone, only myself and the TAs will have access to them.)

Report Items:

1. What was your project topic?
2. If this was a group project, what was your part in the project?
3. If this was a group project, what were the parts of the other members?
4. Describe briefly the main goals you wanted to achieve in your project:
5. Describe the main difficulties encountered:
6. What was the hardest part to implement in your project?
7. What was missing to complete the project to your satisfaction?
8. Project development timeline: how much time did you need to implement each part?
9. Which external tools/help did you use in your project?
10. If this was a group project, do you think each member satisfactorily contributed to the project?
11. Give here any additional comments about your project:

12. CSE170 Evaluation
    a. Comparing to other upper-division CSE courses you have taken at UCM, use the 1-7 scale below for answering the questions below:
       1(very easy/not much)   2   3   4(appropriate)   5   6   7(very difficult/too much)
          i. How difficult was to the course overall?
         ii. How difficult was the 1st exam?
        iii. How difficult was the 2nd exam?
         iv. How difficult/complex were the programming assignments?
          v. How appropriate was the amount of programming assignments?
         vi. How difficult/complex was the 1st project?
        vii. How difficult/complex was the 2nd project?
    b. Do you think the course has a good balance between lectures and projects?
    c. Which parts of the course you liked most?
    d. Which parts should be included or better explained/explored?
    e. Which parts were most difficult to understand?
    f. Which parts were easier to understand?
    g. Please give here any comments/suggestions for improving the course: