

**CS4347 Sound and Music Computing Project Design Report**

Semester 2 2016/2017

**“From Motion to Music”**

**Design Report**

<Remember to save this report as G***XX***.docx, where XX is your project group number>

<You may want to split your teams into subteams. It is also a good idea to have a nominal team/subteam lead.>

|  |  |  |  |
| --- | --- | --- | --- |
| Group **XXX** | Name | Student # | Role (optional) |
| Member #1 |  |  |  |
| Member #2 |  |  |  |
| Member #3 |  |  |  |
| Member #4 |  |  |  |
| Member #5 |  |  |  |
| Member #6 |  |  |  |

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The main aim of this report is to **explain your ideas and designs.** Make sure the reviewers have enough details to give you feedback and advice.

The report will be graded based on:

1. Quality of information.
2. Quality of design: Clearly thought out, Feasible, Easy to manage etc.

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**Section 1 System Functionalities**

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Describe the intended system functionalities**.** It is important to let us (the reviewers) have a clear idea of how the system functions from an external viewpoint (i.e. the user viewpoint).

You can use any of the following:

* Feature lists
* User story

Note that you are not limited to the above options.

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**Section 2 System Overview**

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1. Illustrate the high level system architecture of the intended system. Among other things, indicate clearly:
   1. What gestures are you planning to detect?
   2. What sounds are those gestures going to produce?
   3. What would be the link between gesture motion and sound, i.e. what parameter(s) of the sound would you change with change in motion or gesture?
2. Description / drawing of the intended final form of the system, i.e. the number of phones, number of people, number of instruments, number of gestures, and the link between this ensemble of instruments

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**Section 3 Design**

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Please give:

1. The main algorithm for detecting the list of gestures you plan to use. Start with the major steps of the algorithm and then briefly elaborate how to accomplish each step (e.g. what known algorithm to use, what libraries could be used etc). If appropriate, give a UML sequence / collaboration diagram.
2. List all the sound signals you are planning to use. Specify if the sounds are going to be MIDI, pre-recorded audio, or synthesized, or some combination. Also specify the source (link(s)) if you are obtaining the audio from an open source platform.
3. List the properties of the sounds that you plan to modulate based on gestures and movement. Detail the algorithm(s) for these modifications.

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**Section 5 Project Plan**

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Give a brief timeline (weekly will do) of your internal deliverables and milestones. Try to align with the tentative evaluation timeline to make sure you have enough time to meet all CA requirements. Gantt chart or similar is a good way to summarize your plan.

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**References**

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List all references here.

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