Concordia University

Department of Computer Science

and Software Engineering

Individual Project Report

COMP 471 – Computer Graphics

NAME :	Vengadesa Sri Venkadanathan
STUDENT ID :	3950425
PROJECT:	Obstacle Avoidance

Team-mates

Vincent Garreau	ID: 6129706
Thibault Lecat	**ID: 6130038**

I.   Description of Major Individual Contributions

Describe here **your own** major contributions to the completion of the project, what skills were involved in these activities, and what you learned while doing these activities.

Contribution 1:

Contribution:
1. Animation of all the images that are used for the project and web-site.

2. Over looking and guiding the jitter programming. Helping with the patches.

3. Writing all the reports [Assignments 2 & 3 & Final project report]

4. Prepared the presentation slides for assignment 2 and 3 and presented it to the class.

5. Designed website

6. Administrating the project activities such as organizing the meetings, instructing as how to take forward the project, suggestion of adding and elimination of features, working as a tech person of the group for the logistic and location, bringing the equipments and instruments for the demo setup and setting up installation and its presentation.

Skills involved:
- For 1 & 2, I have used my image animation and programming skills.
- For 3 & 4, I have use my technical writing skills using Microsoft Word & PowerPoint expertise to prepare the documentation.
- For 5, I have used my previous web-designing skills. I have used my customer services, administrative and mentoring skills to conduct the administrative activities.

<u>What I learned</u>:

I am a student from ENCS with less art talents. When I came across assignment - 01, of course, I followed the tutorials and came up with a really nice patch. However, deep inside, I was in a stage that I was just theoretically juggling with several jitter objects combined with possible parameters and getting multiple mind catching outputs.

When the meeting was called for this project, I was with no idea as what to come up with. I approached the professor and confessed that I was out of ideas. He made it very simple to make me feel good and said, just get the image of the person and project that on a screen and then you could try changing something with that which will make a project. That somehow changed my perception towards this course. At the end of the session I proposed that I would be capturing a person who would be coming through the main entrance of EV building, and using the multiple projectors, setting them up in the proper angles, make a 3 dimensional image of the very same person which would be welcoming from the opposite side. Professor was happy to hear this. This is my first milestone of my learning process – the attitude change so that I could envision something and go for its creation rather than admiring the outputs.

Then, following a member of our group dropping the course out and considering the limitation and availability on the projectors, we changed the project to "Obstacle Avoidance". Having the same attitude, I was making sketches and came up with the implementation design and proposed to the team which was accepted by everybody.

Finally, the final artefact was there with its full-fledged functionalities which were built using the digital image and video processing techniques. In addition to learning MAX/MSP Jitter and OpenGL programs, I have also learned a lot of things from this course. The chance that I had to interact with the Fine-Arts students who are mostly with creative ideas gave me a great experience and opened up the way of my thinking.

Ultimately, I have learned so much of great abstract deals such as artistic perception, attitude and confidence and then the other obvious ones such as MAX/MSP Jitter and OpenGL. Also, the mathematical explanations behind the every image/video processing and practical concept gave me solid theoretical understanding. All in all, this course is an effective, enjoyable, educational and fun course although the materials that we had to learn were a lot.

II. Major Negative Aspects

Describe in detail two of the major problems that you encountered in your project. Identify the root cause of this problem, and propose a solution that you could apply to prevent such a problem to happen in your future projects.

Negative Aspect 1:

Problem: Sharing of the workload.
Root cause: Lack of understanding.
Solution: This is one great challenge that I encounter even in my other courses exhausting all of my people skills and talents. I am still experimenting and don't have a rigid solution to fix this problem. However, as a temporary solution what we could practice is that we have to slice the amount of work into very small artifacts and have to distribute it among the group members fairly. Otherwise, having major divisions might not ensure the even distribution of the workload.

Negative Aspect 2:

Problem: Availability of the Labs and Equipments
Root cause: Having limited lab hours There are many students. Most of the time eye-sights would not be available. I also have limited time because of my other courses. This amounted additional stress and frustration that resulted in minimum utilization of lab.
Solution: Reserve the equipments which I came to know at the end Work on the weekend

III. Major Positive Aspects

Describe in detail two of the major decisions, practices, or technologies that turned out to be very profitable to your project. Describe in what sense it was profitable.

Positive Aspect 1:

Positive aspect: Elimination of features – We have removed acceleration and deceleration features from our system
Why it was profitable: We would have ended up hanging the camera from the top to detect the motions (left, right, forward and backward). We chose the 8th floor and there is no place to hang it safely. Other than that, basically, removing this feature didn't suffer the quality of our work because forward and backward movements are based on motion detection and similar kind of algorithm. Less programming and functionality which is compact and easy to handle. Thus, it profited in terms of efficiency and stress reduction.

Positive Aspect 2:

Positive aspect: Elimination of projector and adapting TV
Why it was profitable: Limited quantity of the projectors. Hanging would have been the major problem considering the 8th floor. Time saving was the profitable one.

IV. Peer Evaluation

List below **all** your teammates and evaluate their contribution to the completion of your project according to the listed criteria (1 being worst and 5 being best).

name	effort	leadership	ability	assiduity
Vincent Garreau	5	5	5	5
Thibault Lecat	5	5	5	5

If you think that some member of your team (other than yourself) deserves a special mention for his/her great contribution to your project, mention it below, clearly explaining why this person deserves such a special mention. Answering this question is not mandatory.

Name:
Reason: