

LaTeX report of Box2D design

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1 Why a Project ?

Software Systems lab is a course which is meant to explore all sorts of softwares

The idea is to cover a wide range of softwares which will surely help us to command respect over non - CS majors

But that is a secondary reason

The primary reason is to experience computer science - to experience learning - to experience exploring!

The project is meant to teach us "team - work" and collaboration

2 What's there in it ?

This project aims at making a Rube Goldberg Machine in the Box2D environment

We intend to create a Rube Goldberg machine simulation in the Box2D platform

The idea is to use the inbuilt physics provided by the Box2D physics engine to demonstrate a Rube Goldberg Machine

It will contain several moving objects which will follow the laws of Physics provided by Box2D
There will be balls, dominos, moving planks, and other interesting objects, including ropes and candles

The idea is to learn to implement both physics and graphics in the traditional language : C++

We have been working on this project since past 1 month or so and we learnt a lot in due course of time

3 Project Credits :

The following people were involved in the development of this project :

- 1.) Anmol Arora (Roll number 130050027) : Worked mainly on suggesting ideas
+ the coding part (pendulums)
- 2.) Pranjal Khare (Roll number 130050028) : Worked mainly on developing svg
+ the coding part (cavity)
- 3.) Aman Goel (Roll number 130050041) : Worked mainly on developing LaTeX report
+ the coding part (the lower part)

4 Project Time Line :

The problem statement of the project was released by the end of August 2014

We started to work on it soon after it was released

The work was at it's peak in the middle of September

But soon we had to slow it down because of Mid semester examinations

The project work again took pace after the Mid semester examinations were over

5 Experience with the project :

Our schedule is usually very hectic and additionally we got a project work
So we were indeed tensed
But the team contains very efficient planners who know how to manage things well
So we used to plan and sit together for our project work
Regular planning and skilled management ensured a steady progress in the project
We did face a number of difficulties
For example, the pendulum part was really confusing
It was here that the website www.stackoverflow.com proved to be a boon for us
We used to use Google a lot for any sort of help
Box2D was a new platform to work with. So we were bound to get stuck
But, in the end, we did get solutions to our problems

6 Conclusion :

We did enjoy a lot, and learning Box2D was a great experience in itself
But, we chose to drop the idea of Box2D and the 3 of us decided to rather do the
(Lab 10 + Lab 11) Pro Version project
We realised that Learning Python and Java would be of much more utility
It will be better to learn 2 highly popular programming languages
than just learning Box2D
Also, both of these languages are currently widely in use
So we decided that it was a better idea to learn python and java
Another important reason was the beauty of the problem statement of Lab 10 and 11
The problem statement wanted us to create a real time working web application
which was indeed fascinating
We had just learnt the Gale - Shapley algorithm in our Discrete Structures
course and a project which required an implementation of a recently learnt
algorithm sounded pretty cool to us
All in all, we learnt a lot and we look forward to many other such projects in future