Luke Monaghan - Assignment 3 - Physics API's - Production Plan

Section 2, PhysX.

1) Effects to be demonstrated.
The effects I will demonstrate are simply the ones asked for in the assignment. I have added a few more to the end while messing around.

- PhysX API integration.
- PhysX Scene instantiated and set up correctly.
- At least 1 example each of a static body and a rigid body with a simple collision volume in the scene.
- At least 1 example of a ragdoll in the scene.
- At least 1 example of player controlled model in the scene.
- At least 1 example of a trigger volume in the scene.
- At least 1 example of a collision event with call back in the scene.
- Frame rate should be constrained to a desired rate.
- Example of the game connecting to the Nvidia Physics Visual Debugger.
- At least one example of a physical particle effect.
- At least one example of a fluid in the scene. At least one soft body such as cloth.
- Linked actors. - Extra
- Projectiles. - Extra

2) How they will be implemented.
All effects will be implemented in a "Playground" sense. There is no real application to my assignment. All the elements will allow the player to control and alter themselves.

3) How the chosen effects enhance the scene.
As my scene is more of a playground all the elements are used to demonstrate their usage and creation to other users.

4) A timeline for completion.
A timeline can be seen from viewing my blog. I have been posting and updating it whenever i have worked on something.

5) Name and brief description of at least one commercially successful game which makes good use of these effects.
The game I have chosen is borderlands 2, This game used Cloth, Particles and collisions for the PC version. Examples of the effects are given in the video below.

Borderlands 2 GeForce GTX PhysX Trailer
https://www.youtube.com/watch?v=EWFkDrKvBRU

Section 4, DIY.

1) Effects to be demonstrated.
The effects demonstrated will simply be the ones asked for in the assignment.

- Creating a scene,
- At least two objects added to the scene which react according to Newton's 3 laws of motion,
- Demonstrate a force acting on an object,
- Demonstrate one object applying a force to another,
- Demonstrating collision detection between objects,
- Demonstrate collision response for objects,
- Demonstrating spring physics between connected objects.

2) How they will be implemented.
All effects will be demonstrated in a playground scene much like my PhysX one.

3) How the chosen effects enhance the scene.
All effects will give the scene its individual properties, demonstrating exactly what has been asked.

4) A timeline for completion.
A timeline can be seen from viewing my blog. I have been posting and updating it whenever i have worked on something.

5) Name and brief description of at least one commercially successful game which makes good use of these effects.
These effects demonstrate simple physics in games. They have been used from simple mobile games to advanced simulations. A great example of this would be angry birds, with its simplistic 2D side view and use of clean 2D physics as a core game mechanic.