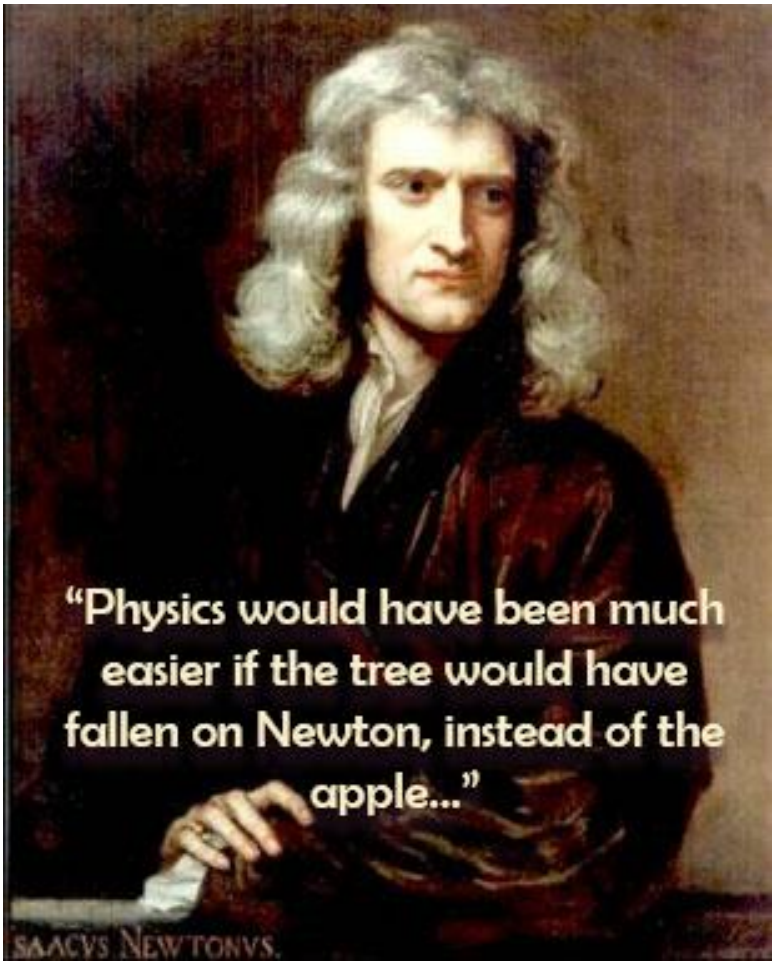

Project manual
Project: 2d Physics

Academy of Creative Technology
Game Design and Producing/ Game Engineering

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1. About

This manual describes “Project 2d Pinball”. In this project all the criteria of the clusters “Game Physics”, “Level editor”, Concept art”, communication skills and “MDA” will be combined.

The schedule details are given on roosters.saxion.nl and the exam schedule can be found on mijnSaxion.nl. You can find the information about the lessons on leren.saxion.nl

1.1 Introduction

In project 2d physics in two weeks, you are going to create a nice game based upon a physics engine. You can write your own or implement an existing engine. Main purpose of the game is that physics enables great game mechanics and are the core element of your game. For inspiration, take a look into old games like ‘the incredible machine’, scorched earth, beak-out, etc.

1.2 Learning Goals

Technical:

- Develops a 2 D Game, using controls, gravity, collisions and user-feedback including sound
- Develops a 2D game applying code quality and code conventions
- Develops a 2D Physics Engine
- Develops a tile based level and trajectory editor
- Uses a project planning (hansoft)

Creative

- Develops complete gamesheet
- Uses a project planning
- Advanced application of colour
- Implement basic audio

2. Organisation

In this 3rd project you will have 2 weeks in order to complete the project.
The project structure is divided as 'usual'. In the first week the concept gets developed (first 2 days) and the designs are made (last 3 days) and checked in the sprint meeting at the end of the week. The week after you will enter production phase, and polishing your game until you have a 'possible shippable project'.

2.1 Platform:

The game will have to be playable on a normal pc.

2.2 Game requirements:

You need to create a game based upon a physics engine/
You are allowed to implement an existing engine (like box 2d), or create your own. The main engine is the GxP engine.

The game needs a begin screen, a game over screen, and the player should be able to quit the game. Music and audio is also a requirement!

2.3 Target Audience:

You are free to establish your own target audience

2.4 Strikes

If teams or team members don't meet deadlines, strikes will be given. 2 strikes result in a redo. Both teachers and students can give strikes when deadlines are not made or performance is poor. If 2 strikes are given, all the material that has been created until that moment will remain property of the group and will have to remain available through a shared drive (e.g. Dropbox)

3. Project planning

3.1 Planning in weeks

Week 1 - Concept				
Release	**User story**	**Checkpoints GTP**	**Checkpoints GCP**	**Game design Checkpoints**
Concept and project structure	As a player I want a designed concept that enables the desired aesthetics	• Functional design • Flowchart • Technical prototypes • Sample build • Demo controls	• Mood board • Sketches (at least 20 pp.) • Concept art (2 to 3 worked out sketches of the final look and feel) • Style sheet • UI design	• Conceptual level design • Core mechanics • Asset list • Game sheet concept phase • Game play prototype • Scrum sheet / Hansoft

Week 1 - Design				
Release	**User story**	**Checkpoints GTP**	**Checkpoints GCP**	**Game design Checkpoints**
Design, vertical slice,	As a player I want to be able to play a prototype of the game	• Technical prototypes • Vertical slice • Workflow design	• Final art • Mock up • asset list • Style sheet • Feedback description • HUD design • Technical guidelines overview	• Game rules • Game sheet Final • Mock-up level • Playtest results and feedback • Scrum sheet

Week 2 Production & polishing				
Release	**User story**	**Checkpoints GTP**	**Checkpoints GCP**	**Game design Checkpoints**
Final game	As a player I want a published and shippable game	• Alpha built • Final bug free game	• Characters / game objects • Animations • Backgrounds • menu / HUD • sound / music design	• Scrum sheet • Final Pitch • Polishing and publication

3.1.1 Planning details

The project is divided into 2 weeks. In week one you start creating a concept, blending into the design phases, which ends at the end of week 1. The week after you will be in production phase, creating all assets and refining the code. At the end of this week, everything needs to be polished and made ready for a 'possible shippable product'.

In terms of Scrum, make sure to get a daily stand-up going and divide the work equally. We advise you to create a Hansoft project. Hansoft is a tool which needs some time to get into, but in this project, you will not be judged on the use of the tool. More important is the detail and accuracy of the planning.

Concept phase:
Functional design:
Create an overview (flowchart for example) of how the game will function.

Technical Prototypes:
Get an overview of what you are capable of programming in terms of functionality in this game.

Mood board / Sketches / Concept art:
Make sure to give an clear indication of what your style is going to be. Use whatever mean necessary to communicate this. This can be a mood board (existing pictures from internet) or sketches / paintings you've made yourself

Game rules, Game sheet, Mock up level, playtest results and feedback, scrum sheet:
Give an overview of what the game is going to be about. For details see the 'on games' cluster, and in particular, the game sheet. Make a mock up level to get a general idea going of what the game will look like, and test it when possible (paper prototype). Make sure to do the planning according to the lectures of the cluster 'Team up'.

Design Phase:

Vertical slice:
The vertical slice should be a proof that all of the parts that should be functioning in the game, are present and are able to be implemented and polished in the final version.

Final Art:
A clear overview of what and in which style the final art work is going to be. Combine everything into a mock-up, showing an image which communicates the style of the game

Asset list:
Make sure to create a list of all the assets. Think of art, animations, sounds, music, background images, etc. needed for the game. Divide this list in MoSCoW rules (Must haves, Should have, Could have, Won't have) in order to prioritize the assets.

Style sheet:

Make sure to establish the style based upon the concept art and mock-up, so that in the production process, every artist knows how to create the style.

Feedback description:
Describe in what kind of ways the player will receive feedback. Think of animations, sounds, pop-ups, mouse-over buttons, etc. and use these as input for your asset list.

HUD Design:
Make sure to design the interface and the 'heads up display' from the game, and make it fit the style

Game rules, Game sheet Final:
Make sure to have a final game design

Mock up level:
Creates an overview of what happens where, and helps you to design the 'narrative' and 'pacing' of the game.

Play test:
Although the game is not finished, get some critical reviews of in-game handling, level design etc. in order to know what to refine.

Scrum sheet:
Update the planning

Design Phase:
Alpha build, Polishing:
the first 'release' of the game. Test is, fix bugs improve- and refine it, in order to be able to polish the last bits, so the game is a (possible) shippable product

Work out: characters, game objects, backgrounds, Menu and HUD, sound and music, level design, based upon the assets list

Testing:
Make sure the game is tested by others, Prepare the final Pitch (10 minute presentation of the game, include a post mortem (who did what, 1 slide per person), basically selling your game.

Polish:
Make sure to refine every detail, in order to come up with a product as beautiful as possible.

4. Contacts

Course leaders:
For any information on the previous clusters you can contact the cluster leaders.

Project lead

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5. Testing and assessment

5.1: Procedure

In this 2 week project you will have to show what both technical and creative students have learned during the first quarter and integrate it into one project.
There are 2 sprint meetings scheduled at the end of each week. The first is used to verify if the progress is on schedule, the second for the final pitch (5 to 10 minutes).
In this presentation you'll need to present the following subjects:

- The game, it's rules and it's mechanics
- Reflection on the process
- Reflection on personal progression (one slide per person)
- The artwork
  Most ambitious features (programming)
- The planning
- Lessons learned

Make sure to have a good looking, fluent and professional presentation!
Deadline is at the end of week 3.2, check 'roosters.saxion.nl' for your final sprint meeting.

5.2: Redo

The Redo will be at the end of week 3.10. In case you don't have a group anymore, consult mr. van Loon at the end of the project weeks (3.2) in order to get assigned to a new team if possible. If your group failed, make sure to consult after the last sprint meeting to see what you need to adjust.
You can make adjustments during week 3.10 and present it at the end of this week. Make sure to consult in between to see if you are on the right track.

5.3: Assessment form

You can download a detailed form on blackboard (excel sheet)