# Design Document for Catapult Fragment 1

[Intro 2](#_Toc366355636)

[Gameplay description 2](#_Toc366355637)

[Artistic style outline 2](#_Toc366355638)

[Components 2](#_Toc366355639)

[Asset & Object breakdown 2](#_Toc366355640)

[Suggested Game Flow Diagram 3](#_Toc366355641)

[Suggested Project Timeline 3](#_Toc366355642)

[Additional Ideas and Possibilities 4](#_Toc366355643)

## Intro

Defeat the enemy king by skillfully launching your puck across the battlefield!

## Gameplay description

This game has digital “Crossbows and Catapults” gameplay with first person aiming.

## Artistic style outline

Initial development will be with primitive meshes. If there is time the primitives may be replaced with free meshes and textured with free textures.

## Components

Gameplay Screen

## Asset & Object breakdown

| Name | Type | Description/Picture |
| --- | --- | --- |
| Puck | GameObject/Cylinder Mesh | Player controlled puck |
| Brick | GameObject/Cube Mesh | Bricks making up wall protecting enemy king |
| Pedestal | GameObject/Cube Mesh | Object elevating enemy king, kinematic so it can’t be moved or knocked over |
| King | GameObject/Capsule Mesh | Player’s objective is to use the puck to knock the king off the pedestal, physics object with box collider so it can stand upright |
| Wall |  | Collection of bricks stacked in front of the king’s pedestal |
| Battlefield | GameObject/Cube Mesh | Plane on which action takes place, pucks falling off plane are reset, bricks falling off plane are destroyed, expected to be a 2 shot minimum between starter area and enemy castle |
| Top Aim Camera | GameObject/Camera | Orthographic camera aiming top down on puck |
| Side Aim Camera | GameObject/Camera | Orthographic camera aiming toward puck perpendicular to battlefield |
| Aim Arrow | GameObject/LineRenderer Component | Shows where player is aiming on side and top cameras, invisible on main camera |
| Timer | GUI Text | Displays running game time for scoring |
| Show Counter | GUI Text | Displays number of shows for scoring |
| Power display | GUI Box | Displays shot “power”, holding down mouse increases power |
| Crosshair | GUI graphic | Displayed in first person aiming view |
| Enemy King Indicator | GUI graphic | Graphical indication of where enemy king is located |
| Enemy King Range | GUI Text | Distance between puck and enemy king |
| Settings Icon | GUI graphic | Clicking brings up settings window |
| Settings Window | GUI control | Pauses game and gives player option to quit |
| Reset Icon | GUI Graphic | Clicking moves the puck back to start in case you get stuck |
|  |  |  |
|  |  |  |
|  |  |  |

## Suggested Game Flow Diagram

Game Screen (title page display, start button)🡪(start button pressed) Game Play 🡪 (enemy king knocked down or quit button pressed) Game Over Display

## Suggested Project Timeline

| Milestone | Date | Description | Done |
| --- | --- | --- | --- |
| Initial Design Document | 9/03/13 |  |  |
| repository | 9/03/13 |  |  |
| Create Unity Project | 9/03/13 |  |  |
| title GUI | 9/04/13 |  |  |
| title to game transition | 9/04/13 |  |  |
| Game settings icon | 9/04/13 |  |  |
| Game settings window | 9/04/13 |  |  |
| Game quit button | 9/04/13 | Child of settings window |  |
| Game over gui | 9/04/13 |  |  |
| Gameplay to gameover transition | 9/04/13 |  |  |
| Gameover to title transition | 9/04/13 |  |  |
| Create game objects | 9/04/13 | Brick wall is created programmatically at start of game |  |
| King knocked off pedestal gameover | 9/04/13 |  |  |
| Place puck | 9/03/13 |  |  |
| build game camera controller | 9/04/13 | Found script in unity forums, locked to x and z axis |  |
| Make clicking during gameplay enter “aim mode” | 9/07/13 | Aim camera is attached to puck, over the shoulder view |  |
| Implement power meter | 9/07/13 |  |  |
| Implement shooting puck at appropriate power and direction | 9/07/13 | Camera looks at shot but doesn’t follow yet |  |
| Implement puck reset button and auto-reset if puck falls off of battlefield | 9/07/13 |  |  |
| Implement puck reset in enemy “end zone” |  |  |  |
| Implement aim arrow | 9/06/13 | Aim arrow only appears in aim windows |  |
| Implement target indicator | 9/07/13 | Indicator to king location |  |
| Build brick wall in front of enemy king | 9/08/13 |  |  |
| Playtest and adjust physics so bricks behave as expected | 9/08/13 |  |  |
| Score indicators |  | Time and shots |  |
| Game score wrap up |  |  |  |
| High score on title page |  |  |  |

## Additional Ideas and Possibilities

* Online high scoring
* Multi-puck teams
* Multiple objectives
* Castle builder
* Rpg elements (rogue puck can be closer to the enemy castle, wizard puck has low mass but does aoe force explosion when he hits)