# Design Document for Catapult Fragment 1

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## 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/Arrow Mesh | 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 |
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## 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 | Todo:brick, wall |  |
| 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” |  | Aim camera will be top down, replace puck model with catapult mode, moving mouse will turn mode |  |
| Implement power meter |  |  |  |
| Implement shooting puck at appropriate power and direction |  | Camera follows shot puck |  |
| Implement puck reset button and auto-reset if puck falls off of battlefield |  |  |  |
| Implement puck reset in enemy “end zone” |  |  |  |
| Implement aim windows |  | Alternate views to help aiming |  |
| Implement aim arrow |  | Aim arrow only appears in aim windows |  |
| Build brick wall in front of enemy king |  |  |  |
| Playtest and adjust physics so bricks behave as expected |  |  |  |
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## 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)