# Design Document for Catapult Fragment 3

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## Intro

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

## Gameplay description

This game uses “golf” mechanics to implement a crossbows and catapults/angry birds style castle destruction objective.

## 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 | Pedestal is stack of 2 bricks |
| 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 | Script generated object collection | Collection of bricks stacked in front of the king’s pedestal |
| Battlefield | GameObject/Cube Mesh | The “Green” of the game, currently 3 battlefield meshes put together making a zigzag green |
| Aim Camera | GameObject/Camera | Camera behind puck to during aim mode |
| Shot Follow Camera | GameObject/Camera | Camera following puck during a shot |
| Aim Arrow | GameObject/LineRenderer Component | Shows direction of fire in aim mode |
| Power display | GUI Box | Displays shot “power”, holding down mouse increases power |
| Enemy King Indicator | GUI graphic | Graphical indication of where enemy king is located, shows up during aim mode |
| Settings Icon | GUI graphic | Clicking brings up settings window, game-icons.net |
| 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, game-icons.net |
| Battlefield Texture | Texture | From Unity Terrain Assets package |
| Brick Texture | Texture + normal | Opengameart.org |
| Damage Brick Texture | Texture + normal | Made by compositing damage and brick texture in gimp |
| Dust | Particle system | Dust from puck hitting ground |
| Brick chips | Particle system | Chips from bricks being broken |
| Warrior puck texture | texture |  |
| Cleric puck texture | texture |  |
| Wizard puck texture | texture |  |
| Rogue puck texture | texture |  |
| Wizard explosion | Particle system | Wizard hitting bricks causes explosion |

## 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 |
| --- | --- | --- | --- |
| Catapult Gamefragment 1 successfully implemented | 9/08/13 |  |  |
| Catapult Gamefragment 2 successfully implemented | 9/11/13 |  |  |
| repository | 9/12/13 |  |  |
| Create Unity Project | 9/12/13 |  |  |
| Visual indicator of shot angle on aim page |  | Putting off until next build |  |
| Chip/shard effect for puck hitting bricks, bricks hitting each other and bricks hitting ground |  | Using puck dust as placeholder  Putting off until next build |  |
| Full sized enemy castle | 9/18/13 | 2 towers, central wall |  |
| Throne for king | 9/19/13 |  |  |
| Increase brick hp | 9/12/13 | Increase to 5 to accommodate new puck class abilities |  |
| Multiple pucks on team | 9/13/13 |  |  |
| GUI puck team display | 9/13/13 |  |  |
| Selected puck indicator | 9/13/13 |  |  |
| Visual indicator when puck is reset by castle |  | Putting off until next build |  |
| Splash effect when puck hits moat | 9/13/13 |  |  |
| Puck selection on aim and play screens | 9/13/13 |  |  |
| Puck cooldown prevents charging power or firing | 9/14/13 |  |  |
| GUI indicator of puck cooldown | 9/14/13 |  |  |
| Puck class framework | 9/13/13 | Puck classes handled inside of puck code for now |  |
| Pucks do brick damage based on their class | 9/13/13 | Wizard-0, rogue-1, cleric-2, warrior-3 |  |
| Cleric lowers cooldown for everyone in aoe | 9/15/13 |  |  |
| Wizard does no brick damage but has aoe explosion that damages bricks | 9/14/13 |  |  |
| Rogue can sit inside castle | 9/14/13 |  |  |
| Wall and castle interior reset all pucks except rogue | 9/14/13 |  |  |

## Additional Ideas and Possibilities

* Online high scoring
* Multiple objectives (enemy castle has magic shield that is brought down by destroying the magic crystal mine, or enemy bricks are made of steel and can’t be hurt/moved unless the puck goes to the blacksmith first to get “armor”)
* Castle builder
* Bricks break into meshes with physics properties