

# Ballista Simulator

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CSS451 Final Project Proposal

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# Project Description

General: Using ASL, Two people are put on opposite sides of each other and they both have a ballista they can aim and shoot. The goal of each player is to shoot each other's targets to increase their score.

## Controls

- Mouse to manipulate scene node on axis
- Right click to swap scene node
- Left click to fire

## App Structure

Model:

- Ballista (Rotation, movement)
- Arrow
  - Movement
  - Collision
  - Firing
- Targets (Spawning and destruction)
- Score

View:

- 3rd person view of ballista
- first person view of current arrow (top left of screen)

Controller:

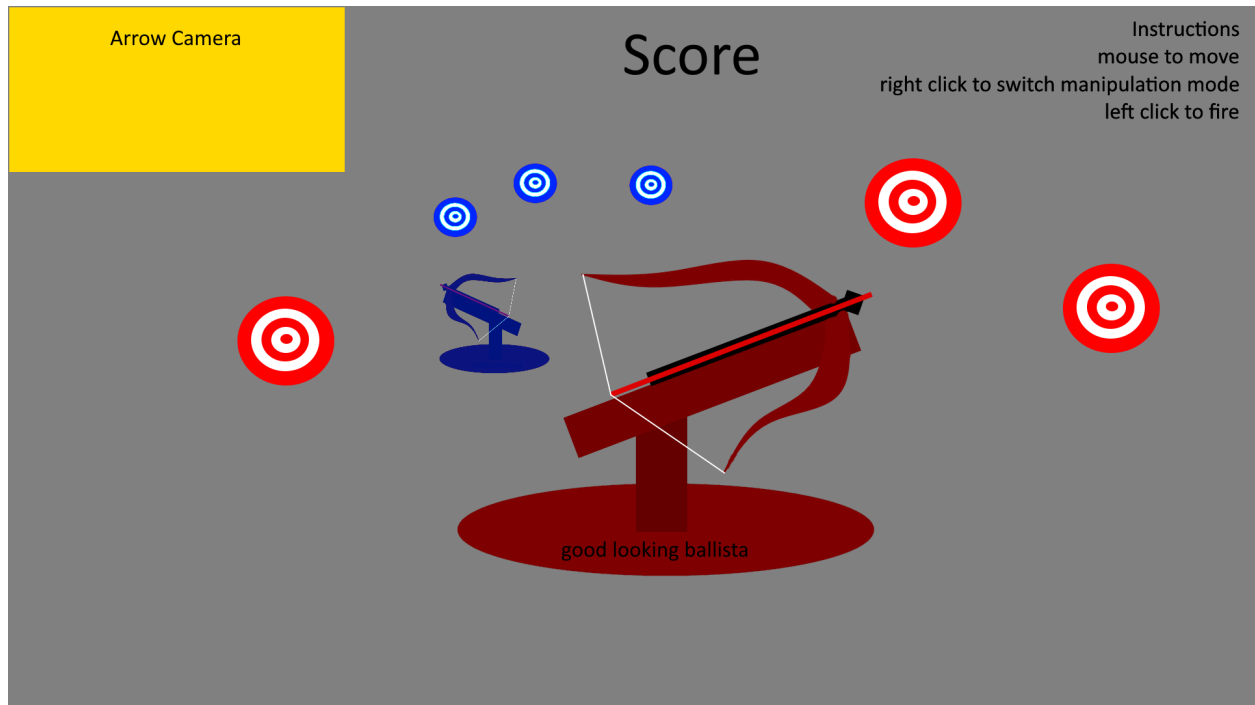
- Canvas
  - Score text
  - Instructions

# Tasks

- Allow computers to connect to each other
- Create Hierarchy (Grace)
  - Base
  - Shaft
  - String (Tricky!)
- Create Arrow and Target Prefabs (Grace)
- Create SceneNode Manipulation
- Create the draw arrow back action (Draw back then arrow spawns?)
- Arrow fire mechanic
- Target interaction
- Ballista manipulation
- Camera manipulation (Main + Arrow)
- Create Textures (Grace)

- Stretch goals:
  - Moving targets
  - Victory condition
  - Visual flare (more textures, shaders and more)

## Sketch`



# Schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Nov. 21	Nov. 22	Nov. 23	Nov. 24	Nov. 25	Nov. 26	Nov. 27
	<b>Project Proposal Due</b>	<b>Team Meeting</b>				
Nov. 28	Nov. 29	Nov. 30	Dec. 1	Dec. 2	Dec. 3	Dec. 4
<b><u>Due:</u> Set up networking for project so two computers can connect</b>		<b>Team Meeting</b>				<b>MP5 Due</b>
Dec. 5	Dec. 6	Dec. 7	Dec. 8	Dec. 9	Dec. 10	Dec. 11
<b>SceneNodes Complete</b>		<b>Team Meeting, <u>Due:</u> Targets and ballista firing</b>	<b>Progress demo Due</b>	<b>Last day of classes</b>		
Dec. 12	Dec. 13	Dec. 14	Dec. 15	Dec. 16	Dec. 17	Dec. 18
		<b>Team meeting, <u>Due:</u> Score, firing animation, stretch goals</b>	<b>Final Demo due</b>		<b>Last day of finals</b>	

# Meeting Technical Requirements

## Tech Req 1: SceneNodes

- Ballista base
- Ballista shaft
- Ballista string

## Tech Req 2: Object Interaction

- Arrow being fired
- Arrow colliding with target

## Tech Req 3: Illumination & Texture

- Woody texture
- Straw texture

## Tech Req 4: Camera Manipulation

- Camera on arrow head
- Main Camera
- Stretch goal: Tracking arrow camera

## Tech Req 5: Working in ASL

- Two Ballista (Players) Shooting targets