Programming Language: Java. Please choose design patterns that are flexible and extensible. Once a working game is on the table, we might extend the game to have additional features. See **additional features** at the end of this document to see what are some of the possible additional implementations to be added later in development.

Dunkable characters:
-Professor: College Professor.
-Dean: College Dean.
-Trutee: falls into an acid tank and shreds the skin off.

**Machine Target:** Standard Java desktop application using JFrame.

Screen resolution: standard screen size of 800x600.

Game duration: every game will last for about 1 to 2 minutes. (needs testing)

Winning objective: All dunkable characters indefinitely respawn once they are dunked. Players strive to dunk as many dunkable characters as possible during the limited time in order to score as many points as possible.

Game Mechanics:
-Target Mechanics – the sliding target:
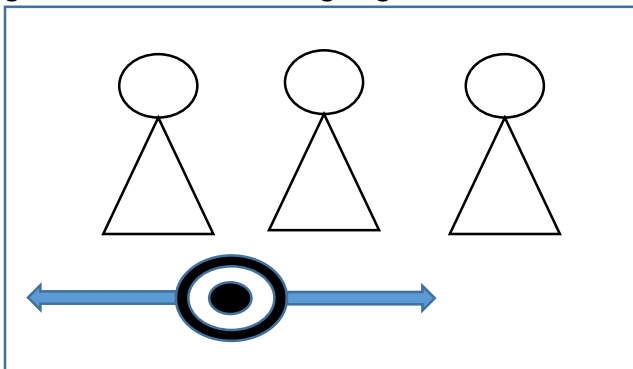
As shown in the picture above, there is a single target that slides to the left and right. If the target is hit while it is under one of the dunkable characters, the character above the target will fall. If the target is hit when it is between two dunkable characters, the two characters between the target will fall.
-Shooting Mechanics - the slingshot model:
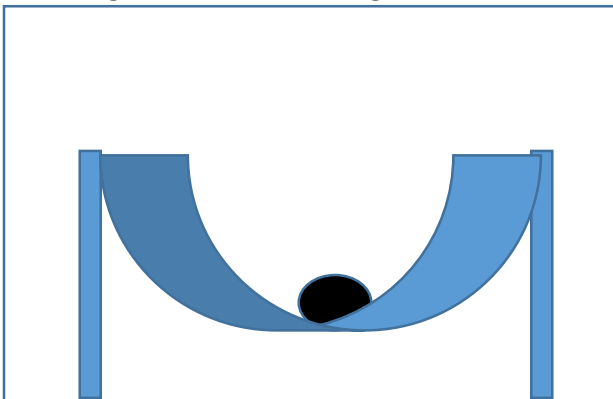
It works like Angry Birds but in first person front view. The amount of force that the object will the thrown will depend on how far back the slingshot is pulled. The slingshot will be pulled sideways to aim and shot towards the opposite side that is being pulled.

Additional Features: (these features are to be implemented only after a workable game is in place).

-Start splash screen.

-Game tutorial called "Blackboard" appearing on the start screen.

-Pause feature.

-Game background.

-Top 10 players high score table

-Multiple difficulty levels including having multiple sliding targets which they have to align in order for a dunkable character to fall; faster moving target, wind factor, etc.

-Different objects to be thrown: tennis ball, bowling ball, darts, etc.

-Score system where each dunkable character is worth a different values. And if the player misses the target and hits one of the dunkable characters instead, the player gets penalty points.

Game References: These are some flash games of the same game concept that we might draw inspiration and reference material from.

http://boomansion.net/media/flash2/games/dunktank.php

http://www.y8.com/games/Da_Dunk_Tank_Dudes

https://www.turkeyhill.com/fun/dunk-tank-game/dunk-tank-game.aspx