# GDD

This project has to include the 4 pillars of OOP (inhertance, polymorphism, encapsulation, abstraction). The project is a simple prototype that includes all these 4 pillars and it is driven by these 4 pillars.

## INHERITANCE

The parent object is going to be Shape. Then Cube and Ball will inherit from it.

## POLYMORPHISM

All Shapes will have a MoveToEnemy() function, but Balls will be faster.

All Shapes will have a ImpactOnCollision() function, but Cubes will have heavier impact.

## ENCAPSULATION

For a shape, you may need to get or set its name, but prevent the name from being too long.

## ABSTRACTION

For shapes, you might have MoveToEnemy(), ImpactOnCollision() and Upgrade() functions.

## GAME

The game is a simulation of 10 cubes vs 10 balls. These shapes get spawned in random locations on their side. They move to their closest enemy and try to bounce them off the map. The game is over when one side loses all their shapes.