**Junior Programmer**: OOP Theory Project

Project Brief

# Application Concept

# Overview

This project will be a top down “bullet hell” style game where the player must survive waves of different enemies and challenging bosses in the form of everyday animals. The core concepts used in the project will be the fundamentals of Object-Oriented Programming.

### Inheritance:

* Enemy -> Dog/Cow/Moose/Deer
  + Further abstracted by different types of the same species
* Food -> Cookies/Bananas/Pizza/Bone
* Player -> Punk/Farmer/Business Person

### Polymorphism:

* Different food will be thrown at different speeds and different directions
* Different animals will all move towards the player and deal damage but some will stun or slow the player’s movement

### Encapsulation:

* Players will be able to enter their name but will be limited to a character count
* Players will be able to upgrade their fire rate but only if they pick up the same food they already have equipped.

### Abstraction:

* Animals will have a FollowPlayer() function
* Players will have a Move() and Fire() funtions