# \*Rakhawy\* Game Design

# Goal

To survive and achieve the highest score. Score is earned by:

* Staying alive and passing time (1/s for 1st min)(\*2 per min)
* Defeating enemies (X points per enemy type) (kill streak multiplier 1.5)(streak cooldown 5s) (\*1.1 per min)
* Valuable pick-ups (coins, gems, …)

# Player and Player Control

Player floats in an underwater environment. The entire head of the player is cover by a collision polygon as a hurtbox to detect enemy collision. A hitbox will dynamically appear at the tip of the head depending on the player velocity. The hitbox will be used to defeat enemies. Tuning fields:

* Hurtbox collision polygon
* Hitbox collision polygon
* Velocity threshold for hitbox

Player character movement is physics-based simulating underwater movement. Touch input will add force to the player pushing him in the opposite direction. Tuning fields:

* force value (controller script)
* force is proportional to distance between touch point and player position
* player mass (rigidbody)
* player drag (rigidbody)

# Enemies

Enemies appear from the edge of the screen and pass through the screen in various patterns. Enemies are either defeated by the player or they exit the screen.

# Enemy Types

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# Power Ups

Pick-ups grant temporary enhancement to the player.

* Invincibility: player can’t be hurt. Tuning:
  + Duration
* Contiuous Movement: player moves like a rocket. Tuning:
  + Duration
  + Linear Speed
  + Turning speed
* Screen Blast: defeat every enemy in the screen:

# Mechanics

* No pause mid-game
* Enemy variety and quantity increase with time with a limit at the end.
* Randomized enemy patterns
* Randomized power ups (chance of appearance increase with kill streak)