

# **GAME DESIGN DOCUMENT**

# **SOMETHING FISHY**

**Version 1.0**

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# 1. GAME OVERVIEW

## 1.1 Introduction

The following document outlines a digital game specifically designed to instil the principles of lean management/lean manufacturing in the employees of Philips manufacturing company, in a way that contradicts the conventional e-learning applications by introducing fun-filled and immersive gameplay mechanics.

## 1.2 Objective of the Game:

To imbibe the principles of lean management subconsciously to the players.

## 1.3 Objective in the Game:

To save the shoal of fishes from the dangers of the sea and move to a safer location to build a house for their survival before the time runs out.

## 1.4 Target Audience:

Managers of various departments.

## 1.5 Devices:

Mobiles, Tablets

## 1.6 Platforms:

Android, iOS, Windows

## 1.7 Nature of Game:

Open world, 2D, Multiplayer

## 1.8 Number of Players:

4 - 6 Players

## 2. THE STORY

The Uba bay was once an abode of peace and happiness for all our Bulu fish friends. Until one fine day, a devastating whirlpool struck their habitat. Everything that they knew to be home went swirling down into the depths of the eternal dark sea bed from which no fish had ever returned.

Now it is upon you and your friends to find a new home for yourselves. Get into the shoal of fishes and explore the expanse of the sea with your friends in the multiplayer mode, as you collaboratively strive to complete the objectives of the game.

The waters beyond, bring with them unprecedented dangers and challenges that threaten your life. The immediate task is to collect diverse raw materials along your escape route, anything and everything, that you think would be necessary to build yourself a new home. You will also have access to a fish store where you can buy and trade valuable and unnecessary resources instantaneously through the game. The quality and strength of your new house will depend on how well you manage the utility of your resources and how optimal your decisions are with regards to the construction of your house. The elder fishes have already warned you of the impending danger that could be a tsunami, a heart attack or a cyclone. A house that would save your lives is your mission which is nothing short of a timed challenge.

But be wary of going astray from the path taken by your shoal. Remember, sticking and working together will be the key to your survival.

## 3. GAMEPLAY

### 3.1 Task 1:

The landing screen of the game when a new game is loaded gives the player a scenario where his/her fish is swimming through the sea amidst 5 other fishes(players). The game being a multiplayer one requires all 6 players, controlling their fishes, to travel together in a shoal within 10 units distance from the shoal (An area of 10 units square will occupy 1 percent of the total play area). If a fish wanders away from the shoal at any point of time in the game, then a countdown timer is provided for that player (15 seconds) to return back to the shoal, failing which all players lose the game. At all times through the course of the game, a minimum of 3 fishes have to stay together in the shoal.

### 3.2 Task 2:

The fishes need to follow a specific path which may vary depending on the course the players choose to take. In course of this action the players have to collect/drop resources that might be needed to construct a house. These resources will be made available along the path traversed by the players. There shall be an upper limit(1kg) as to how much weight a fish can carry along with it. Each unit of the resource will have a specified weight designated to it. All in all, there will be 6 types of resources available for the players to collect. The players are also allowed to exchange/transfer their collected resources unit by unit to one another provided the upper limit of the player is not exceeded after the exchange/transfer, in which case the last collected resource will be dropped.

### 3.3 Task 3:

Once the safe destination is reached, the fishes have to construct a house using the collected resources, based on the the calamity that they are expecting. The calamity will be one among the three listed below.

- Cyclone
- Shark Attack
- Tsunami

Once the type of threat is known to the players, they have to make a choice (independent or collaborative) for the type of house that they want to build from the given options(6), that pop up on the screen at this point of the game(Time freezes for the duration of selection of house). Each house has it's unique attributes that might either prove to be resistant or vulnerable to the advent of the calamity. Each house also has the resource requirement label

that gives the players an idea of how much of what they will need to spend if they want the house ready.

While selecting the house, if two players want to build the same house, they get the opportunity either to collaborate on a single house or build independent houses. Once a house is chosen, an area is allotted to the player(s), to build the house. The resources that are necessary will be dropped onto the construction site and in such a manner, the houses will be built.

### 3.4 Action Sequence

1. Travel in a shoal
2. Collect resources
3. Reach home construction site
4. Select the type of house
5. Use resources to build house
6. Trade resources through the fish store
7. Exchange resources if necessary
8. Search for more resources if necessary
9. Wait for the calamity to strike at the end of 5 minutes
10. Evaluate where the player went right/wrong in debrief session

## 4. Game Elements:

### 4.1 Resources:

The following table gives the weight attributes of each resource.

Resource	Weight per unit(grams)	Time for construction (seconds)
Gems	200	20
Gold	150	16
Pearl	100	12
Pebble	50	8
Shell	20	4

Each of the resource units has a specific value in comparison to the other resource units. Thus the resources can be exchanged at the shop on the basis of barter system.

Resource	Barter Value
1 Gem	2 Gold
	4 Pearls
	8 Pebbles
	16 Shells
1 Gold	2 Pearl
	4 Pebbles
	8 Shells
1 Pearl	2 Pebbles
	4 Shells
1 pebble	2 Shell

## 4.2 House Attributes:

Each of the houses has three basic characteristics - roof, wall and foundation. Each characteristic is valued between 0 to 100 percentages. Apart from these, the houses also come with a tag of cost. The player will have to spend the respective amount of resources to construct the house.

The player will encounter 6 houses in the game:

<b>HOUSE</b>	<b>RESOURCES REQUIRED</b>	<b>ATTRIBUTES</b>
<b>Aquaria</b>	Gem: 1 Gold: 1 Pearl: 6 Pebble: 8 Shell:30	Roof: 60 Walls: 35 Foundation:70
<b>Coreal</b>	Pearl: 4 Pebble: 8 Shell: 25	Roof: 10 Walls: 85 Foundation: 45
<b>Bermuda</b>	Gold: 1 Pearl: 2 Pebble: 15 Shell: 20	Roof: 75 Walls: 20 Foundation: 60
<b>Hydrovilla</b>	Gem: 1 Gold: 3 Pearl: 6 Pebble: 20	Roof: 65 Walls:15 Foundation: 80
<b>Seacasa</b>	Gem: 2 Shell: 80	Roof: 20 Walls: 80 Foundation: 55
<b>Oceana</b>	Gem: 2 Gold: 2 Pearl: 8 Pebble: 12 Shell: 30	Roof: 95 Walls: 25 Foundation: 55

### 4.3 Types of Impending Calamity:

At the beginning of the game the players are informed about the type of calamity that will strike them. They are then required to collect resources and plan their houses accordingly.

The type of disasters are:

<b>CALAMITY</b>	<b>DAMAGE PREDICTIONS</b>
Cyclone	Maximum damage to the roof Moderate damage to walls Foundation strength can be ignored
Shark Attack	Maximum damage to walls Moderate damage to the foundation Roof strength can be ignored
Tsunami	Maximum damage to the foundation Moderate damage to the roof Wall strength can be ignored

### 4.4 Time Tracker:

#### Overall Timer:

The objectives of the game are to be achieved before the timer runs out. Each player has 5 minutes to play the game. The timer doesn't stop at any point in the game, be it collection of resources, trade of resources, or construction of houses. Apart from the time when a house needs to be selected and the player needs to make an informed decision regarding which house to choose, in which case time freezes temporarily.

#### Wander Timer:

A fish is required to be a part of the shoal throughout the game. At times when a player wanders off from the rest of the fishes either to collect resources or to explore the surroundings a separate timer countdown is triggered. In order to avoid losing the game, the player will have to return to the shoal before time runs out.

### 4.5 Protagonists:

The fishes of the Uba Bay(4-6).

## 4.6 Player Perspective:

- Can see the side view of the ocean bed
- The player's fish remains at the centre of the screen while the background pans to simulate a motion visual effect.
- The fish is also animated appropriately to look in the direction of motion and move its body to indicate its actions.
- A visual indicator of the direction to be taken by the fish is provided to assist the fish in case it wanders away from the shoal
- Each player can see on the screen the quantitative amount of resources that all other players have collected through the course of the game.
- Upon reaching the destination a player is allowed to select the house for construction and is immediately assigned a place of the construction.
- The player can either zoom in and see only his progress or zoom out and look at every other player's' progress.
- Each house has a health meter that can be monitored through the construction process. A threshold level is made visible on the meter for the players to assess the quality of the house under construction. The house will fail to withstand the calamity if it's health meter shows a value outside the narrow acceptable range of the threshold.

## 4.7 Screen Navigation:

- The player can access the store at any point of the game by swiping in from the bottom right corner of the screen.
- The screen zooms into the destination as soon as it is reached and a pop up shows the available options for the houses to be constructed.
- Once the time runs out, the players lose control of the fishes and they automatically move into their houses/ house location. The visuals show a calamity strike and depending on the quality of the house built, the outcome as to whether the house collapses and fishes die or they survive and win the game is depicted.

## 4.8 Store:

The store can be accessed at any point of the game by swiping in from the bottom right corner of the screen. As each house has different resource requirement, the store provides

the facility to exchange the resources which might be a waste for the resources that player had failed to collect.

A barter chart for the resource exchange facility is provided in the section 4.1

## 4.9 Resource Handling:

The players are free to have a give and take in terms of the resource they collect with no limits or restrictions. They can also collaborate to build the same house and put in the resources together.

If a player wants to discard a house and join another player in a desperate attempt to win, all the resources that have already been used on the previous house will be discarded and cannot be used again.

Currently the visuals will not show specific information of each resource type and value. Instead, a net value of resources collected by a player and the net amount of resources required to build a house will be depicted in the visuals. Further development on visual resource differentiation is under progress.

## 5. GAME CONTROLS:

- Swipe across the screen in any direction to control the direction of propagation of the fish. With one swipe the fish gets propelled to move a few distance units and will come to stand still if no interaction is continued.
- The resources are dragged and dropped onto the house during the house construction process from the side of the screen.
- To access the store the player needs to swipe in from the bottom right corner.
- Picking up resources would be accomplished by first tapping on the resource when it appears on the screen and moving into the resource's vicinity to pick it up.
- The player can transfer the resources to other players by tapping on to the player avatars. Then dragging units of the resources.
- For constructing the house, the player has to drag his resources from the repository and drop it in the construction area.

## 6. SOUND

- Background music in a loop during the game play (Underwater)
- Introduction music
- Resource collection
- House construction
- Time ticking
- Gradual approach of the calamity as time runs out.

## **7. LEVEL DESIGN VISUALS**



# PHILIPS

*portal*



employee ID



password

login

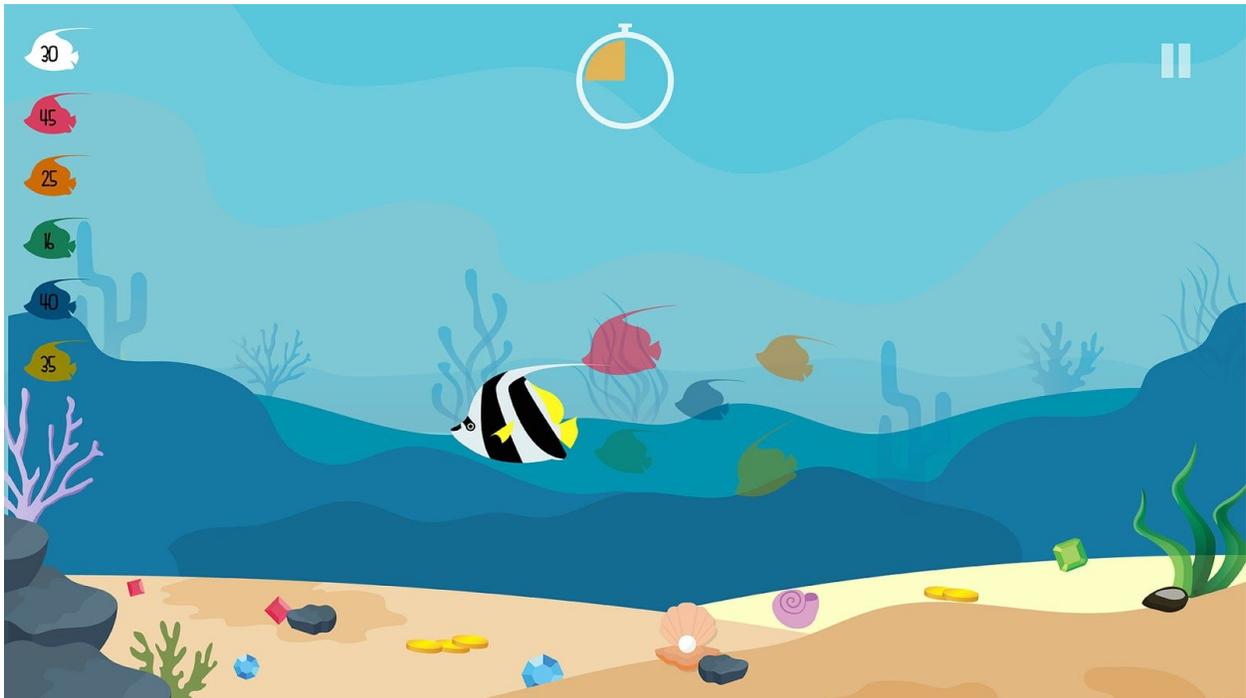
powered by



lean mean games



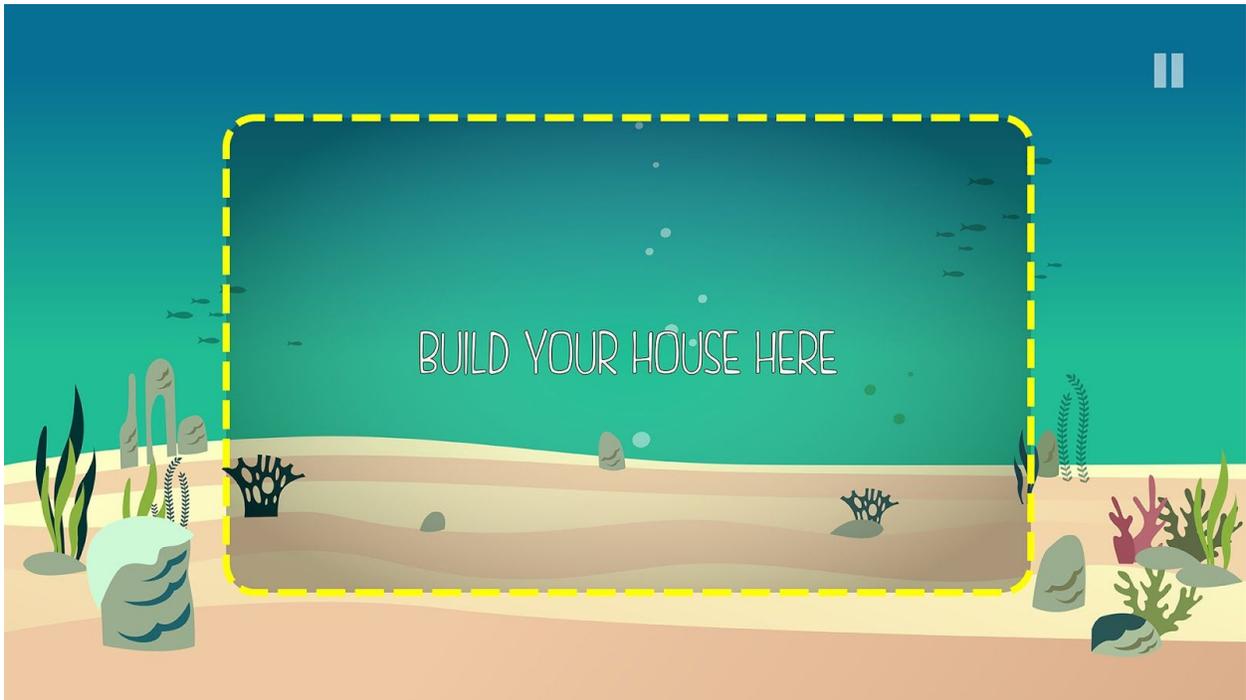
01 SPLASH SCREEN



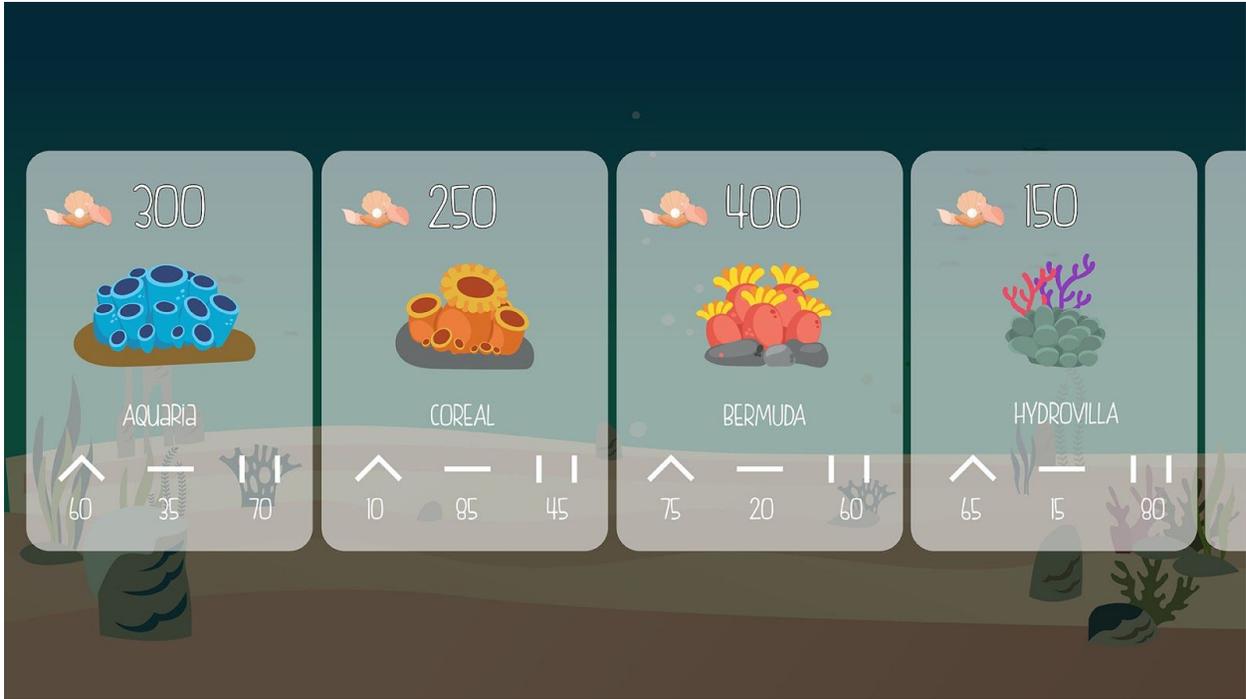
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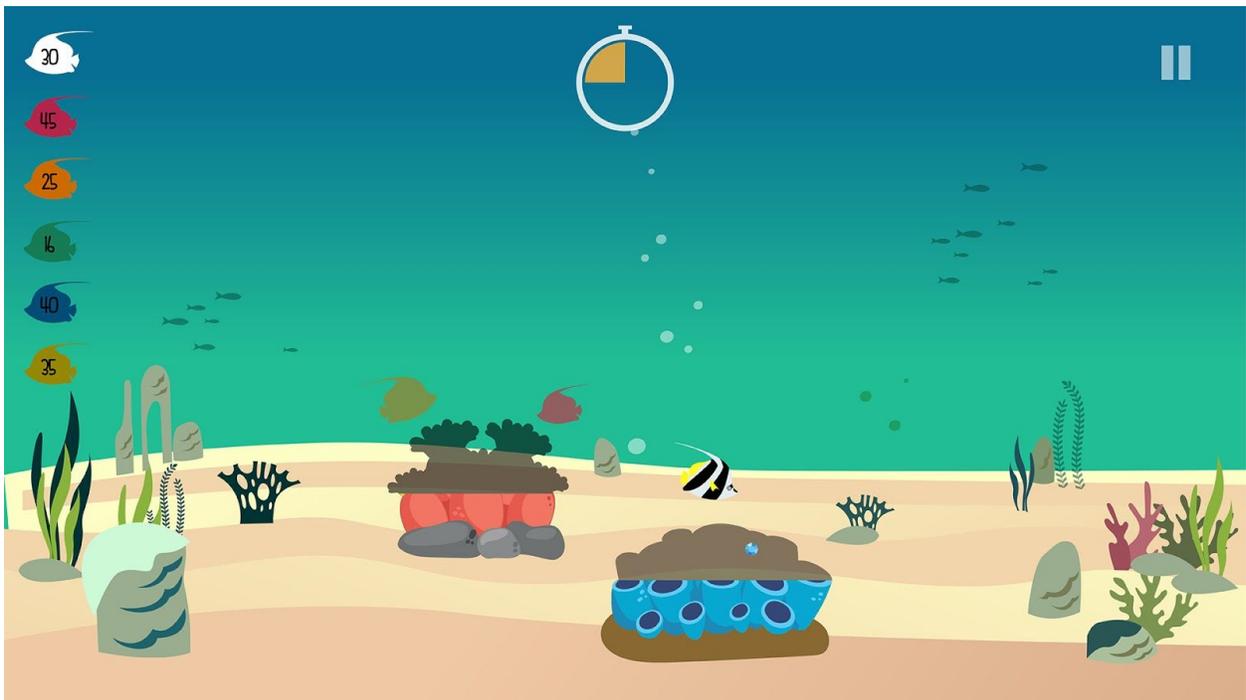
03 SEPARATION FROM THE GROUP



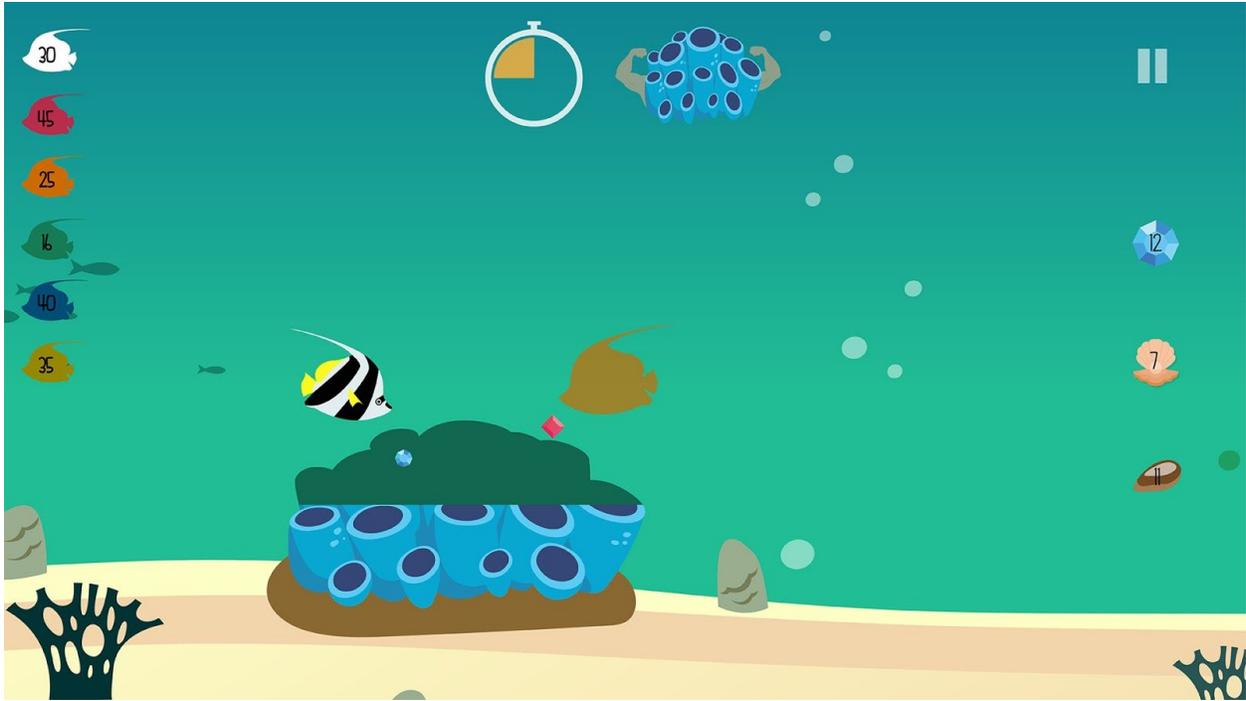
04 DESTINATION REACHED



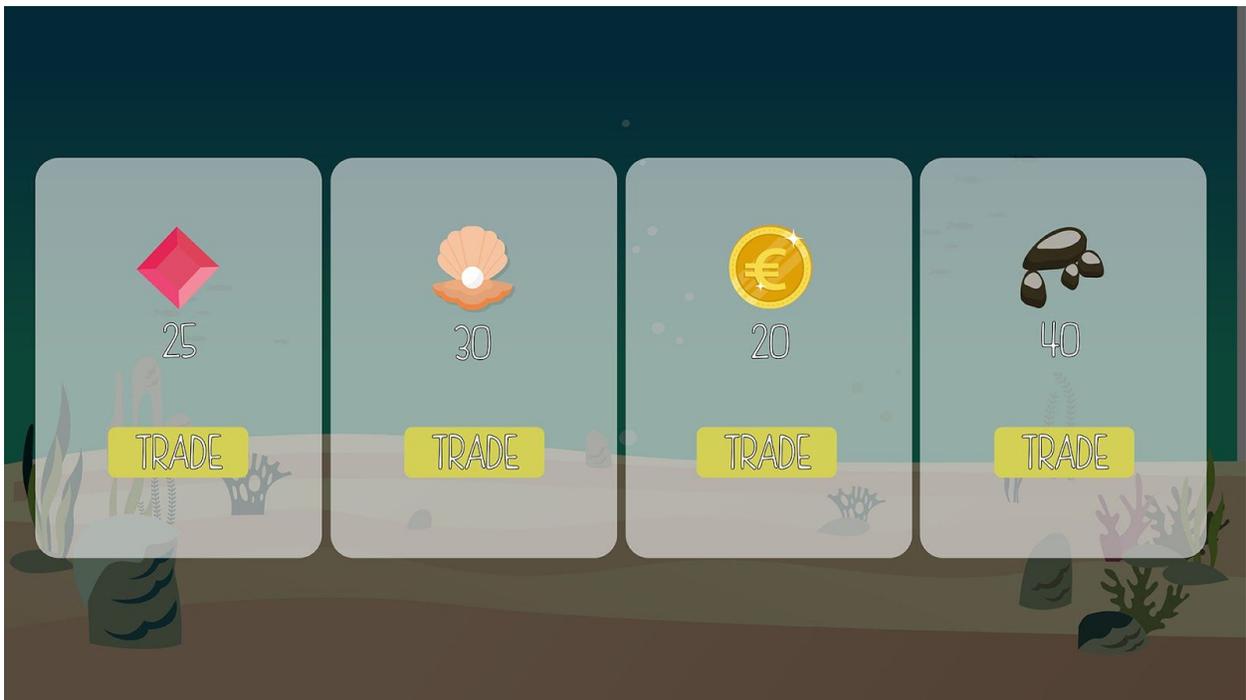
05 HOUSE SELECTION



06 HOUSE BUILDING FULL VIEW



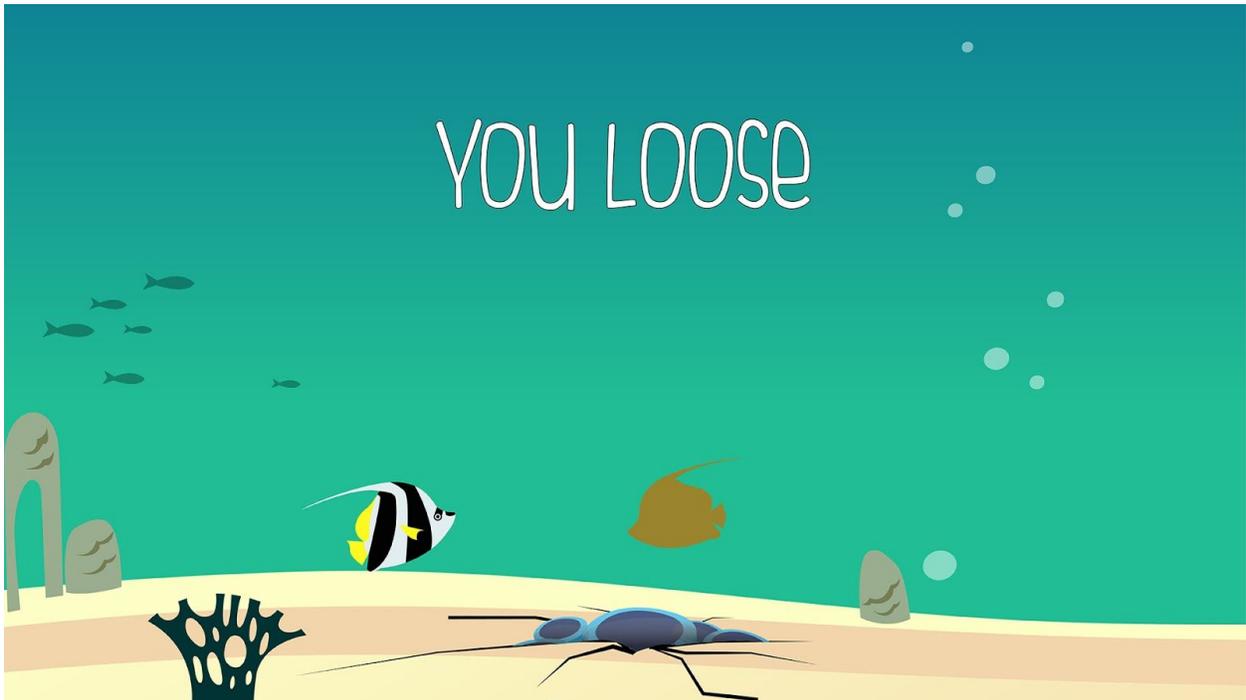
07 INDIVIDUAL HOUSE BUILDING



08 SHOP



09 WIN SCREEN



10 LOOSE SCREEN