# Super Rainbow Reef

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Changes:

In order to make this game more interesting and easier for the player, I have added a bigger Pop sprite (twice as big as the standard Pop). I have also created a rainbow block sprite. From this sprite I created a bigger Pop object so that when the Pop object hit the rainbow block, it will turn into the bigger Pop object (Picture 1).
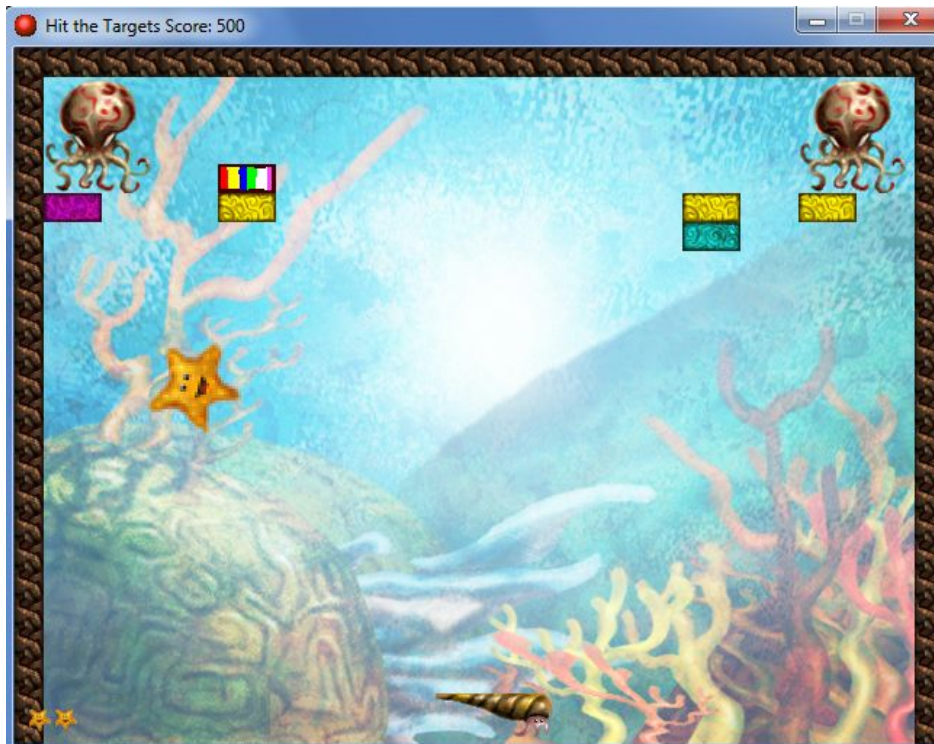
Picture 1: Bigger Pop after hitting a rainbow block. Lives are changed to small Pop instead of using small Katch.

The second changes that I have made to this game is to change the lives from Katch to Pop (Picture 1). I think it made more sense for the lives to display Pop the starfish instead of Katch the shell.

Problems Encountered:

While creating the game I had trouble with the collision event between Pop and the object Katch. Pop did not bounce off Katch's shell in different directions. Instead, the direction of Pop's bounce barely changed. This was because I have forgotten to subtract Pop's horizontal position from Katch's (Picture 2).

Picture 2: Subtracting Pop's horizontal position from Katch.

Building the Game:

Resources
- In this game there are 4 button sprites for the title page. There are also 12 different blocks sprites and 3 different types of Pop sprites.
- In addition, there are 7 sounds for this game. These sounds were obtained from the resource CD.

Object Events and Actions
- A background_main with a under the sea theme was used for all of the rooms in this game. This background was obtained from the resource CD.
- There are about 30 objects, all were created from their corresponding sprites (picture 3). Except for controller object which did not require a sprite.
- Six rooms were created all from the same background_main. The first room (room_frontend) and last room (room_completed) are not in the actual gameplay but serves as the title page and a finishing page to welcome and congratulates the player.
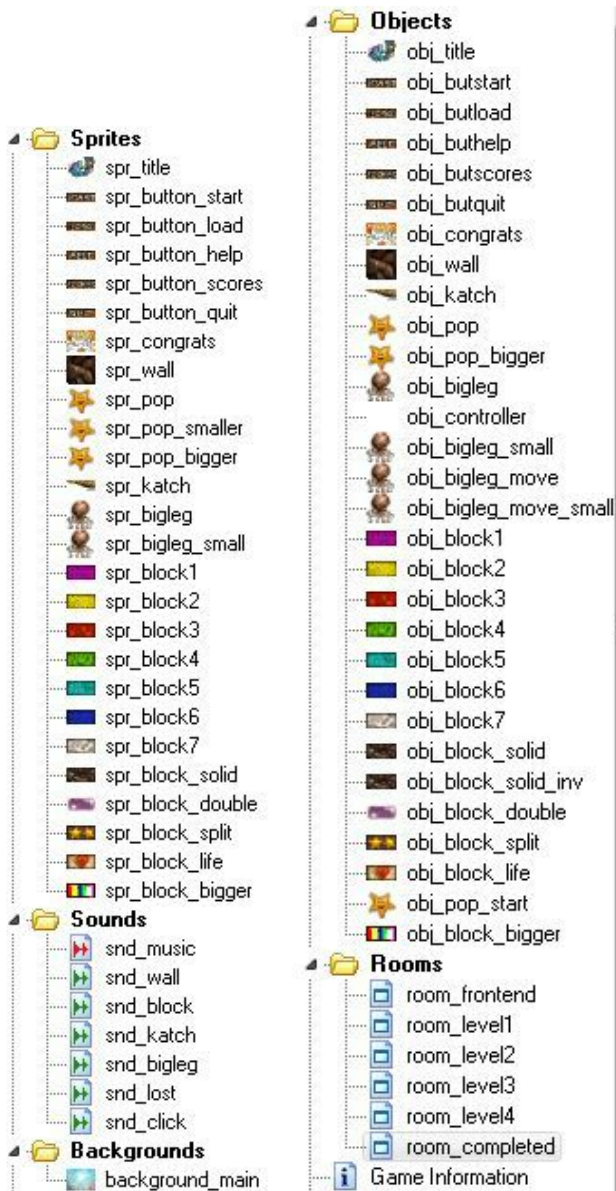
Picture 3: Resource menu for the game Super Rainbow Reef

obj_title
- set score to zero and lives to 3
- play game music at game start

obj_butstart
- the start button in the title page
- left mouse click will proceed the game to the next room with sound click

obj_butload

- play sound click and loads the game

obj_buthelp
- play sound click and show game information

obj_butscores
- play sound click and show high scores of the game

obj_butquit
- play sound click and exit the game

obj_congrats
- gives bonus 1000 points
- Show high score and restart to the first room

obj_wall
- no event, solid object

obj_katch
- Can move left and right when pressing the left and right arrow keys if there are no walls blocking the way

obj_pop
- Moves freely at 12 speed with a gravity downward of 0.2 speed
- Will bounce against solid walls
- Bounces against Katch in different directions depending on the angle pop landed
- Bounces against the blocks and destroys it giving the player 20 points and plays snd_block
- Collusion against the purple obj_block_double will be the same as normal blocks except that it will change it to obj_block1
- Collusion against obj_block_bigger will be the same except it will transform obj_pop to obj_pop_bigger.
- If Pop falls outside the room, a life will be lost. If there are zero life, then the game is over. Plays snd_lost

obj_pop_bigger
- same event as obj_pop except there is no collusion with obj_block_bigger event

obj_bigleg

- Collision with the object pop will destroy itself and give the player 200 points
- plays snd_bigleg

obj_controller
- No sprites, if there are no more biglegs, the next room will appear
- if there are no more lives for pop the game ends and the high score table will show
- draw the lives at the bottom left hand corner of the game. Image of lives are of a smaller version of pop
- press esc key will go back to the first room (room_frontend)
- press L will give the player 1 extra life
- press N will proceed to the next room
- press P will go back a room
- press R will restart the current room/level
- press S will save the game

obj_bigleg_small
- the parent of this object is obj_bigleg so it will inherit all the events of that.
- the difference is that it is smaller than the standard bigleg

obj_bigleg_move
- the parent of this object is obj_bigleg except this object can move horizontally and will reverse in direction if it hits a wall

obj_bigleg_move_small
- the parent of this object is obj_bigleg_move

obj_block1
- No event. This is just a solid object.

obj_block2 to obj_block7
- the parent of this object is obj_block1 so it will inherit all the events of that.

obj_block_solid
- the parent of this object is obj_wall except this object is invisible

obj_block_solid_inv
- the parent of this object is obj_wall except this object is invisible

obj_block_double

- no event, just a solid object.

obj_block_split
- Collusion with obj_pop will create two other instances of obj_pop

obj_block_life
- Collusion with obj_pop will give the player 1 more life

obj_pop_start
- slight pause at the start and then change to obj_pop

obj_block_bigger
- no event, just a solid object.

Game Information:

Instructions
The objective of this game is to destroy all of the Biglegs. To do this, bounch Pop the starfish off of Katch's shell to hit the Biglegs and destroy them. However, Biglegs are protected by the coral reef blocks so Pop will have to destroy those first to get to the Biglegs. There are different types of Biglegs, there are the standard Biglegs and a moving Biglegs. In addition, there are also small Biglegs, some can even move! Pop has three lives, if Pop miss Katch's shell and fell outside the room, he will lose a life.

Don't worry about losing lives to quickly because Pop can gain lives by hitting the heart blocks! Also, Pop could split into three starfish if he hit the split blocks. In fact, Pop could even grow twice as big (hint: hit a special block)! The player will gain points by destroying the reef blocks that are protecting the Biglegs but it is not nescessary to destroy all of the blocks.

Controls:
<left mouse> click any button in the start menu
<left arrow key> Moves Katch to the left
<right arrow key> Moves Katch to the right
<N> Next level
<P> Previous level
<L> Give 1 extra life
<R> Restart current level
<S> Save game
<Esc> Exit the game

\<F1\> Help page

\<F5\> Start game

\<F9\> Takes a screenshot of the game