C++ 2D Game

Ice Hero

Game Design Document

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[Datum]

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Introduction

The assignment is making a C++ 2D single player game for the Breda University of Applied Science application. The theme of the game is Ice.

Game overview

Game Concept

The game will be a 2D platformer with a player which can only jump and will always move forward unless it bounces against something it will go in the opposite direction. Also, the player (made from ice) will melt while playing. By collecting ice coins the player will grow and you are capable to reach the end of the level. In a level, there are multiple obstacles some are moving and some are static. Also, some obstacles will kill you instantly and other will just let the player bounce the other way.

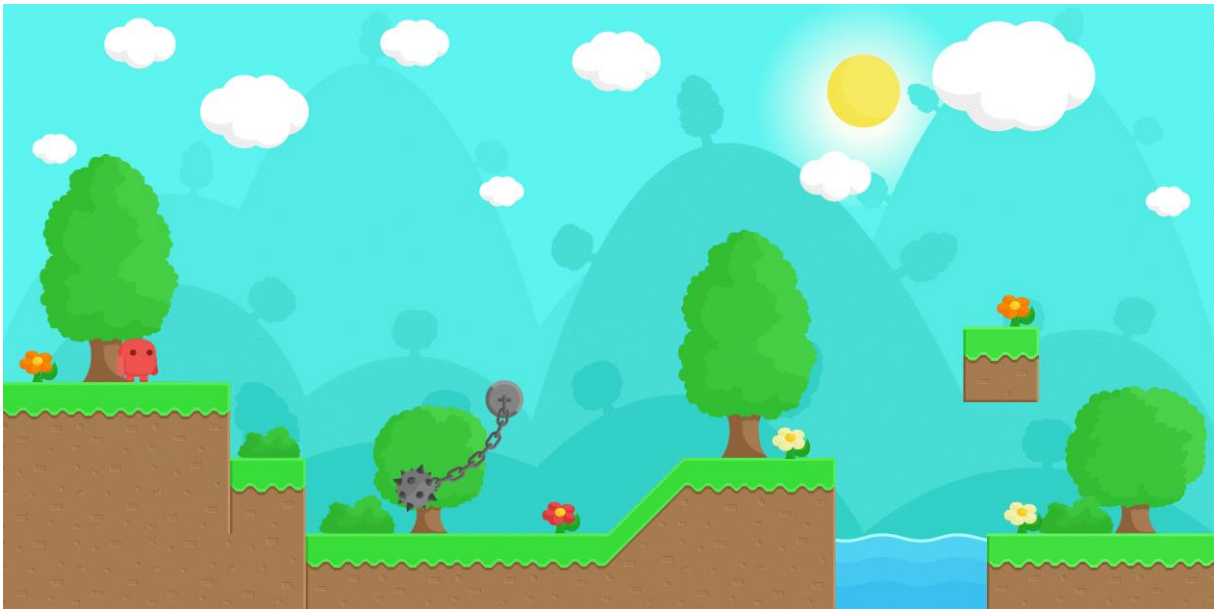
Genre

Casual Game

Audience

People who like to play a simple fast game to pass time.

Look and Feel

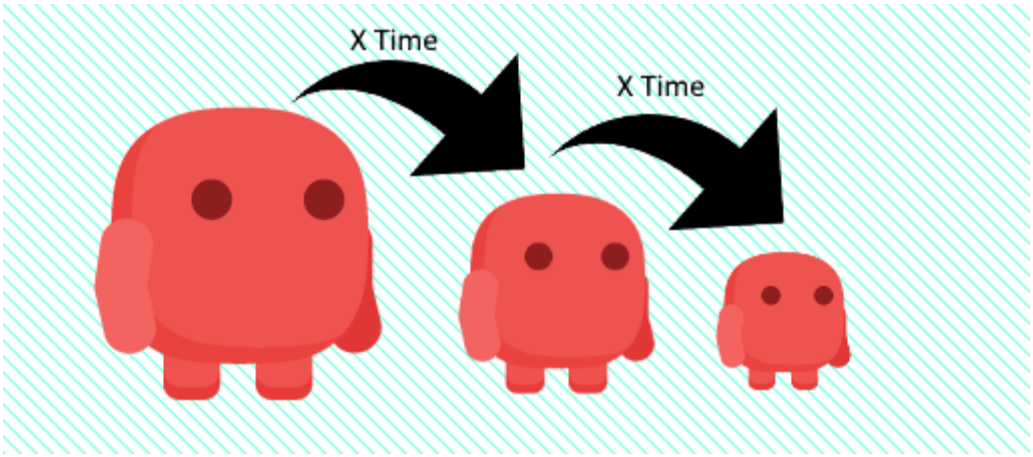


This game will look friendly and needs to feel fast because you have to hurry so you don't melt before the end of the level. The character can't stop so you have to stay focused otherwise you will die.

Gameplay and Mechanics

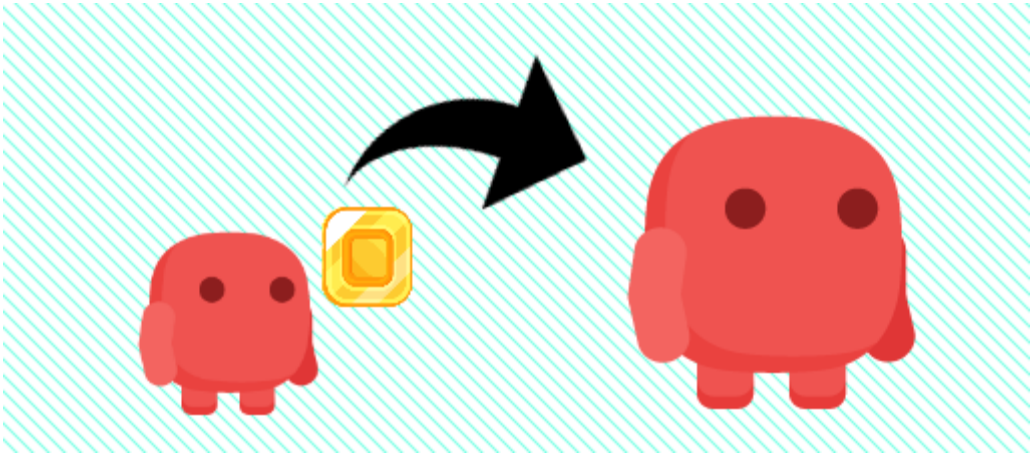
Shrinking

The character is made of ice so it will melt over time till its gone. The character will melt linear, the player size will visualize the health of the player.



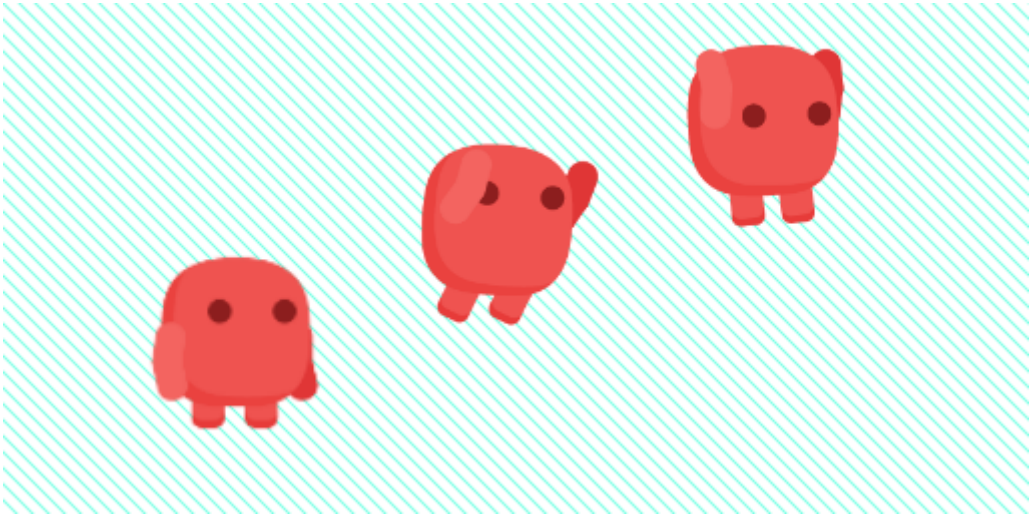
Growing

The player can also grow when collecting an “ice” coin. This will happen fast and afterward the player will start shrinking again. This way the player can reach the end of the level and won’t melt completely.



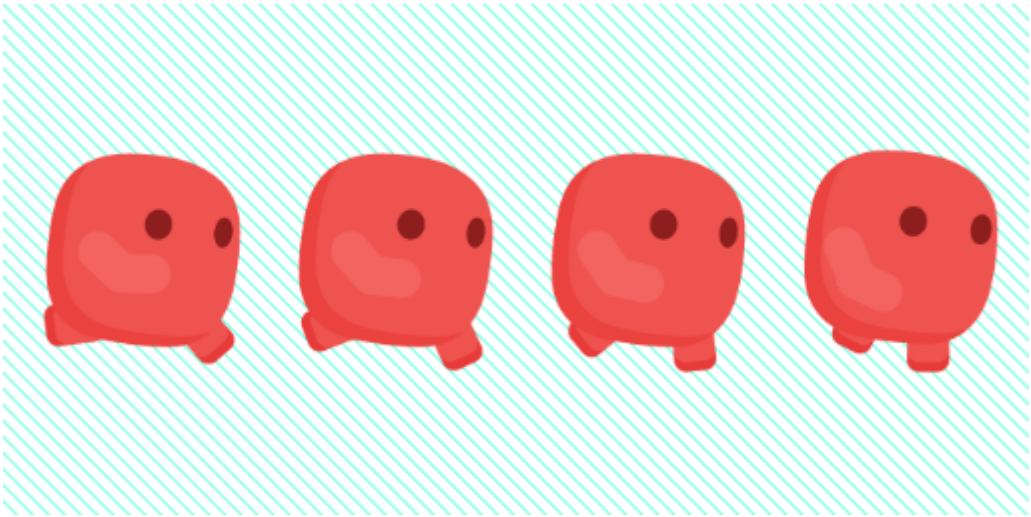
Jump

The player can jump so he can jump over obstacles and jump on other platforms. Because otherwise, the player won't get any further in the level because it will keep turning all the time(see turning).



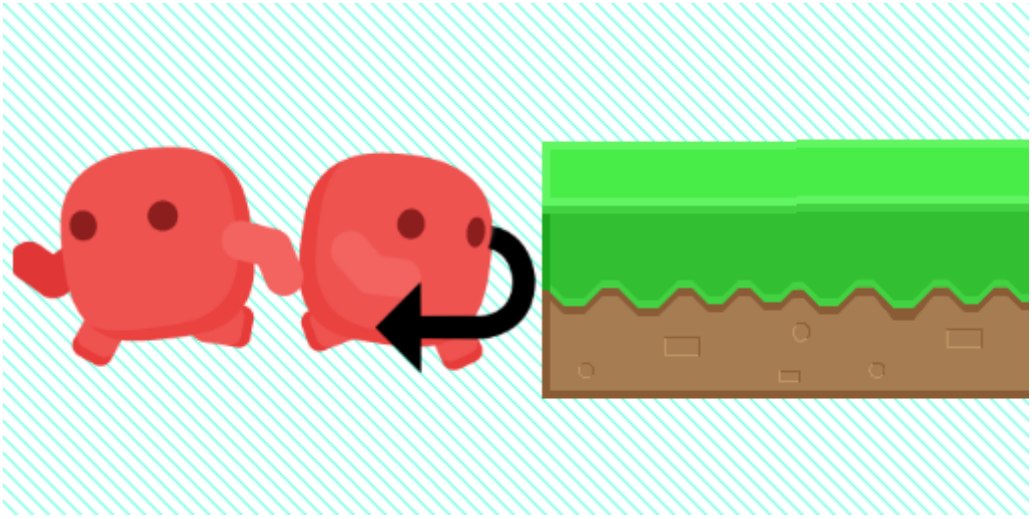
Running

The character will always keep running and won't stop till he dies or finished the level. The player can't control the speed or direction the character runs.



Turning

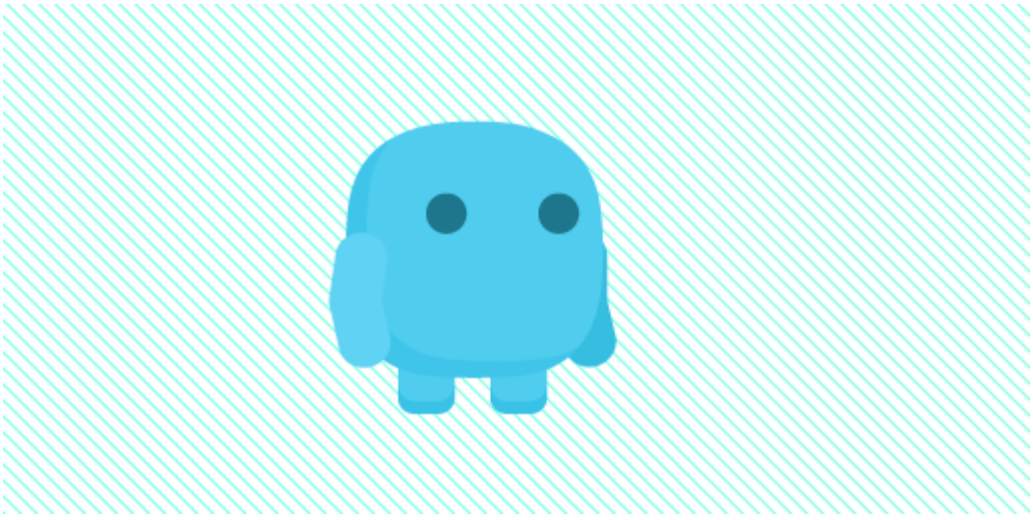
When the character hits an obstacle which won't kill him he will turn around. To keep moving forward you need to jump over the obstacle. When the player is between two obstacles he will keep turning the other way.



Replaying

There will be multiple levels these levels can be replayed for a better time. Or just want to practice. Replaying will only change your time when it is faster than your previous time.

Character

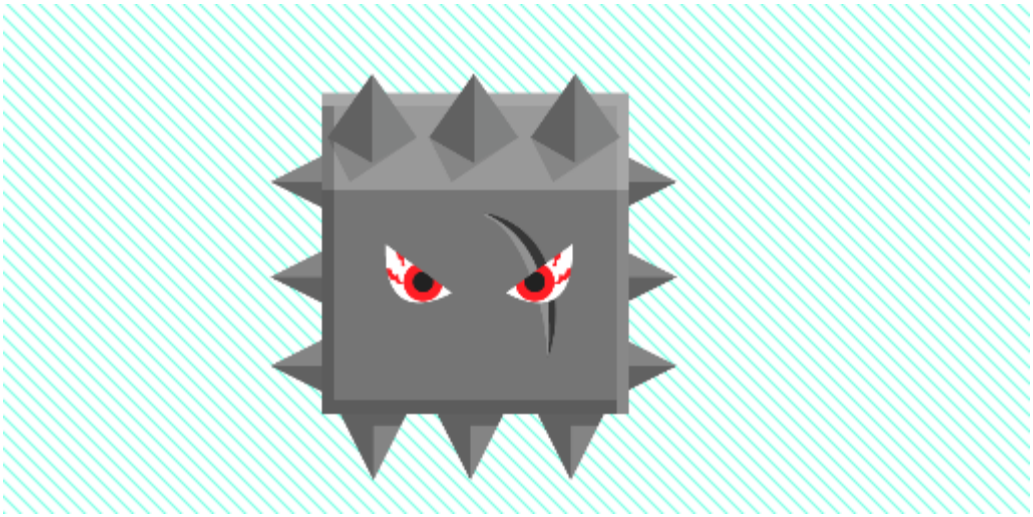


The character will be blue(ice) and will have arms and legs. The whole character will melt(shrink) over time. For the player, there is a run animation, jump animation, idle animation. For the melting effect the scale of the player will be decreased.

Enemies

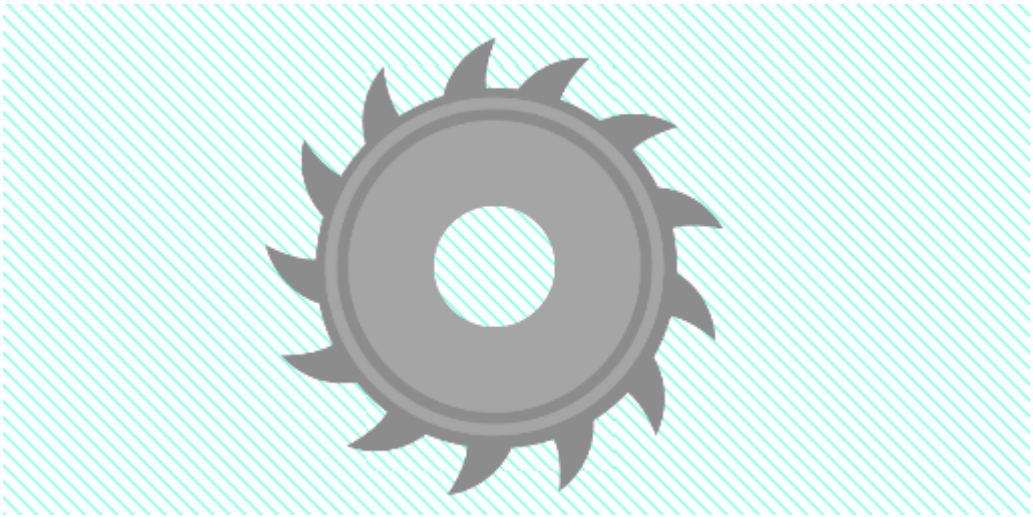
Spike cube

This enemy will be moving up and down. He will slowly move up and when he reaches the highest point it will quickly fall down. When he hits the player the player will die instantly. For this enemy, your timing needs to be perfect.



Saw

The saw will be rotating very fast and won't move from its position. When the player touches the saw it will die instantly. The player can survive this enemy by jumping over it.



Levels

The levels will look like the image below like a normal platformer only the levels need to be designed a little bit different. Because the player can't stop or rotate at any moment so the levels need to adjust to that.

Interface

There will be a simple menu for picking a level. In the game there will be only a menu button and a timer in the upper right corner so the player can see how long he is playing in that level.

Game art

The art for this game will mostly be from this link: Platform: Platform assets. This bundle contains all things needed. The character and his animations need to be changed to make them work for this game. The player and the coins need to be blue like ice. And the animation needs to be compatible with the way sprite sheets are handled in the SFML library.