

Polar Bear

By
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Pitch:

Polar Bear is a game where we have to help a polar bear find his home, an igloo, before all the ice in his path melts, if this happens he will be lost in desertic ocean. In his adventure he will meet allies, that will help him to find his home before a catastrophic thing happens. But he will also meet enemies who want to hunt the poor bear, and the way to defeat them is through his friends.

Setting:

The courses are set in the north pole because the main character is a polar bear (we also know penguins live in the south pole but it's a simple polar animal choice, a walrus would've been kinda overshadowing). This setting shows the traditional environment of an area such as this.

Game components:

Objects:

- Polar bear
- Penguins
- Predator
- Tile
- Water
- Fog
- Endpoint
- Igloo
- Touchscreen
- Map
- GUI: Game information

Attributes:

- Position of the bear
- Bear movement speed
- Bear radio vision
- Penguins quantity
- Position of the penguin
- Penguin movement speed
- Predator position
- Predator movement speed
- Tile lifetime
- Tile position
- Endpoint position
- Igloo position
- X-position of the touched area
- Map level
- Map penguin quantity
- Map predator quantity

Relationships:

- When the screen is touched, the polar bear will move to that position.
- If no tile is present on polar bear's position, the polar bear will fall.
- When tile lifetime is zero, the tile disappears.
- If no penguins alive, the game will end.
- When allied penguins quantity increases, bear vision radio also increases.
- When allied penguins quantity decreases, bear vision radio also decreases.
- When a predator touches a penguin, the penguin dies and the predator leaves.
- When the polar bear reaches a penguin group, one penguin will join the polar bear group.
- When the polar bear reaches the endpoint, a new map level appears.
- When the polar bear reaches the igloo, the player wins the game.
- The GUI: Map level is displayed at the top of the screen
- The GUI: A line with current polar bear position and final endpoint is displayed at the right of the screen.

Game mechanics:

In Polar Bear, the player will spawn in a glacier, which has tiles that melt randomly creating dangerous holes for the bear to fall in. In each level the player will begin with 2 penguins, the penguins will act like the life of the bear since they are necessary to travel because the radius of vision of the player will depend on the number of penguins. If the player loses all penguins the game will end. The player will lose penguins when the predators that are on the map get close enough to touch one and kill it. The player can recover penguins by searching groups of them that randomly roam the map.

The predators or enemies will move slightly faster than the player, so the player must avoid getting near them when moving or will risk losing a penguin and since vision depends on the number of penguins, the less the player has the most likely the player will run into a group of enemies. The enemies randomly roam the map.

The goal of the game is to in each level reach a safe place where to rest and in the final level to find the igloo. In each level, the difficulty will be increased by limiting the number of penguins the player can have, also by making the map more dangerous for the player by tuning the number of enemies and the probabilities for other encounters like finding a group of penguins.

Since the game will be designed for mobile devices, the player will control the bear by touching a place in the touchscreen to make it move. The camera of the game will be horizontal top-down.

Optional features:

The idea of an Easter Egg. Therefore, at one level there is the possibility of finding a secret portal that directs you to an additional level. This stage will contain an explanation of the game, and will also contain a variety of extinct animals, which will function as awareness of the message to the player.

A scoreboard will be implemented to promote competitiveness among the different players who use the application. Said scoreboard will be found in the game menu and will take into account the time in which the level was finished, as well as the number of penguins with which the igloo is reached.

Team Members:

Sergio Lizano: 0 years of Unity experience, 7 years of coding experience (Java, .Net, Angular, etc), took a course on AI once, console gamer (not really a pc one).

Vitaly Mayorga: 0 years of Unity experience, 7 years of coding experience (Java, .Net, C#), 3 years of Quality Assurance experience, pc gamer.

Oscar Barahona: 1 year of Unity experience, 5 years of class-room coding experience (C#, Java, Python), zero art skills, pc gamer.

Benjamin Blanco: 0 years of Unity experience, 4 years of coding (Java, C), art skills, mobile gamer.

Daniel Sorto: 0 years of Unity experience, 8 years of coding (Java, C, python, javascript), zero art skills, console gamer.

Division of Labor:

Sergio Lizano: coding, documentation.

Vitaly Mayorga: coding, documentation.

Benjamin Blanco: coding. Documentation, UI.

Daniel Sorto: coding, documentation.

Oscar Barahona: coding, documentation.