

Jungle Juggle

Team:

- Kymyz Crew

Members:

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Brief Description of the Game

The game takes place on a 2D top-down map where the objective is to operate an African safari by handling managerial tasks. The game can be played with at least three different speed levels (hour/day/week), which can be switched at any time during gameplay. The game must feature at least three levels of difficulty.

Plants and Water Areas

The map is scattered with bushes, trees, and grassy areas. Players can also purchase plants. Initially, there will be small water sources, but ponds can be built as well.

Animals

The safari is home to free-roaming carnivorous and herbivorous animals. Herbivorous animals can eat trees, bushes, and grass, while carnivores feed on herbivores.

Both groups require water to survive. Animals have a limited lifespan, and as time passes, they age and consume more. Animals tend to live and migrate in groups of their own species. Groups containing adult individuals can reproduce. Well-fed animals will rest for hours and then randomly select a point on the map to move to before repeating this behavior until they become hungry. Hungry or thirsty animals will try to reach food or water sources they have already discovered.

Jeeps

Tourists who visit the safari rent jeeps for their adventure. A jeep can carry up

to four passengers. Players must purchase the jeeps.

Roads

The safari has an entrance and an exit. One or more navigable roads must be built for vehicles, connecting the entrance and exit. Vehicles randomly choose a path from the entrance to the exit to transport tourists and return without passengers to the entrance.

Capital

Players are given an initial capital, which can be used to purchase plants, animals, jeeps, roads, and other tools. The safari generates revenue through animal sales and tourism (jeep rentals). The number of tourists depends on how much they enjoy what they see, meaning they want to observe as many and as diverse animals as possible during their trip.

The End of the Game

- The game is won if, depending on the difficulty level, for 3, 6, or 12 consecutive months, the number of visitors, herbivorous and carnivorous animals, and the player's capital are all above preset thresholds. Each of the thresholds are different. For example, it could be at least 80 visitors, 20 herbivores, etc.
- The game is lost immediately if the player goes bankrupt or all animals become extinct.

MINI TASKS

Minimap [0.5 Complexity]

- The map should be larger than what is displayed and should be scrollable, accompanied by a navigable minimap.

Poachers [0.5 Complexity]

- Poachers should appear, attempting to hunt animals: they can shoot them or capture them and bring them outside the safari. Poachers are visible only when tourists or rangers are nearby.

Rangers [0.5 Complexity]

- Rangers should be implemented, who can eliminate specific predators the player chooses. Players earn money for eliminating animals, but rangers must be paid at the beginning of each month. Rangers can also protect against poachers by eliminating them when in close proximity.

2Day-Night Cycle [0.5 Complexity]

- The game should feature a day-night cycle. At night, only areas with plants, water, or roads are visible. Animals are visible only when near tourists or rangers, or if the player purchases location chips for them (paid per individual animal).

Terrain Obstacles [0.5 Complexity]

- The map could include terrain obstacles like hills and rivers. These obstacles slow animal movement and influence pathfinding. Hills allow animals to see farther, while rivers also serve as water sources.

Persistence [0.5 Complexity]

- The game state should be saveable and reloadable. Upon reload, any entities in motion (animals, rangers, poachers) should resume their paths from where they were when the save occurred

Controllable Rangers [0.5 Complexity]

- Rangers can be directed to pursue specific poachers. Players earn bounties for eliminating poachers. However, poachers can detect pursuing rangers and may retaliate.

POTENTIAL MINI TASKS

Advanced Surveillance System [1 Complexity]

- Players can purchase fixed cameras, airships, or drones to defend against poachers. These devices reveal their surroundings within a certain radius regardless of the time of day. Cameras are stationary, but players can assign patrol routes with waypoints to airships and drones. Airships can stay airborne all day, whereas drones need to land and recharge every hour. Recharge points must be purchased and installed, which is a prerequisite for drone purchases

2.5D Graphics [0.5 Complexity]

- The base task requires implementing top-down graphics. This task involves

creating 2.5D graphics where objects visually extend beyond their own cells (e.g., a tree covering entities on the tile above it).

3D Graphics [0.5 Complexity]

- Instead of top-down graphics, the game could feature 3D visuals with rotatable view of the map.