

Team Dabus - Illuso Game Readme File

Team Members

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Installation Requirements

- 1- Unzip provided folder.
- 2- Open the “build” folder.
- 3- Double click on Illuso-Final.exe

Gameplay Instructions

The premise of the game is that you play as a medieval magician trapped in a puzzle laden labyrinth. Your goal is to escape through the large w

- Press ‘W’, ‘A’, ‘S’, and ‘D’ keys to walk forward, left, backward, and right, respectively.
- Press ‘space’ to jump. This feature is unavailable until you pick up the “Jump” ability card.
- Press ‘T’ to toggle between cards. This feature is unavailable until you pick up two or more toggleable cards.
- Press ‘F’ to use the chosen card (throw fire and ice cards, activate invisibility). This feature is unavailable until you pick up a toggleable card.
- The “toggleable cards” are the “Fire”, “Ice”, and “Invisibility” cards.

Requirements Met

- **Game Feel: Achieved.**
 - 1- The player has direct control over the character:
Use the WASD keys to move through the 3D world
 - 2- The player can interact with parts of the environment:
 - Bricks before the “Jump” card can be dropped
 - Player can jump over obstacles
 - Rope can be burnt to drop a crate of explosives
 - Guards can be shot with fire and ice. Fire causes them to run away, Ice stops them in their place
 - The bunny can be frozen with the Ice card
 - The moat can be frozen and melted
 - Metal Gates after the moat can be pushed open
 - The invisible maze can be phased through with the Invisibility card
 - Fire from the dragon burns Illuso
 - 3- The game takes the player’s actions into consideration based on their context:
 - If you try to use the fire card on the rabbit while it has the ice card, it only causes sparks to fly off it.
 - You can freeze and melt the rabbit once you get the ice card.
 - Using the fire card on the bunny burns it and causes it to run to the rabbit hole.
 - Melting the frozen moat while the guards are on it kills them.
 - Using the invisibility card allows the player to phase through the invisible walls.
 - Passing through the dragon’s sight causes it to breathe fire on the player, causing him to run to the moat to put out the fire [actually just teleports there].
 - Passing through the dragon’s sight while invisible causes it to ignore the player.
- **Fun Gameplay: Achieved.**
 - Goals and subgoals were effectively communicated to the player
 - We have signs placed around the map to give the player hints on what to do next
 - The game provides interesting choices to the player
 - There are different ways to solve puzzles. For example there are different ways to catch the bunny in the bunny maze and different ways to kill the guards and get out of the first puzzle.
 - There are different ways to deal with the guards: The player can either run, hit them with guards, or use the environment to get away or kill them

- Your player choices must have consequences (dilemmas)
 - The player can be killed or or forced to restart if he solves a puzzle wrong
 - If the player unfreezes the moat while on the moat, he will die
 - If the player is caught by the guards, he will die
 - If the player gets caught in the dragon fire, he will die
 - The player can burn a rope and drop a bomb on guards to kill them
 - The player can unfreeze the moat to kill the guards
- Player choices engage the player with the game world (e.g. buttons, climbable ledges, gun turrets, computer terminals, vehicles, etc.) and inhabitants (AI-controlled agents)
 - The player has multiple stairs to climb and a fence to jump over
 - There are pushable blocks and a wall of pushable blocks for the player to interact with
 - There are pushable gates for the player to open
 - There are multiple AI controlled guards that will interact with the player if he gets too close
- Your game must achieve balance (balance of resources, strategies, etc., as appropriate)
 - The guards move at certain speeds in different states so that they aren't too easy or too difficult to deal with
 - Throwing cards is an easy concept to learn but it is hard to master it accurately
 - Some of our puzzles were easy and some of them were hard so we changed them to make them the appropriate difficulty
 - We added environmental ways to kill the guards to make the player have an easier way to deal with them
- Reward successes, and (threat of) punishment for failure
 - We show the player the guards before they are actually threatened by the guards
 - There are signs that the dragon will kill you
 - There are signs that tell the player the water is dangerous
 - The invisibility maze has skeletons in it
 - We reward the player with a new card(ability) when they complete a puzzle and they can unlock a new area of the map
 - Sounds warn the player of dangers
- In-game learning/training opportunities (e.g. gate restrict player to safe area until basic proficiency in new skill is demonstrated, etc.)
 - The player cannot access areas he is not prepared for and does not have abilities for yet
 - Areas are blocked by a burnable fence so the player cannot get past it until he has that ability
 - The player cannot cross the water until he has the ice card
 - The player cannot get past the dragon until he has the invisibility card

- When the player gets a card, he has an opportunity to test it on something before it is needed to solve anything: When the player gets the fire card, he can burn a rope to drop a bomb before he has to use the fire card to finish the puzzle. When the player gets the ice card, he can freeze the bunny before he needs it to solve a puzzle. When the player gets the invisibility card, he can use it to escape the maze before he needs it to solve the final puzzle.
 - Appropriate progression of difficulty
 - Our puzzles get progressively more difficult
 - Avoid opportunities for players to trivially beat your game challenges. That means playtesting to observe emergent strategies that might break your game!
 - We playtested our puzzles to make sure they were not too easy and adjusted the difficulty where we needed.
- **3D Character with Real-Time Control: *Mostly Achieved.***
 - The input controller was custom-crafted.
 - Player has root motion
 - Player has animations for each action he can perform
 - Controls are low latency
 - The character model was imported.
 - The movement controls are intuitive, and the auxiliary controls (switch cards and fire cards) are illustrated when they come into play.
- **3D World with Physics and Spatial Simulation: *Achieved.***
 - The game area is sufficiently bounded. The player cannot fall to infinity.
 - We created our own world
 - Player is restricted to certain areas until the appropriate card(ability) is gained
 - There are crates the player can push around and a wall of crates hiding a card for the player to go through
 - There are rigidbody gates for the player to push open
 - The moat can be frozen and unfrozen by the player
 - The player can hit the invisible walls with cards to make them appear and solve the maze
 - The bunny can be hit with cards and will react
 - The guards react to cards
 - Fences can be burned with the fire card
 - Burning the rope after getting the fire card causes a TNT crate to fall and explode on the guards.
 - The bunnies have hopping animations.
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- **Real-time NPC Steering Behaviors/Artificial Intelligence**
 - AI steering behavior is based on Milestone 4 and uses the same predicting the players path behavior
 - The AI has multiple states: Patrol, Chase, Flee, Wait, and Searching

- Ai has animations and sounds for each state
- The guards are fast enough to make it a challenge for the player
- The Ai can be affected by the player by the player throwing cards at the guards: if the guard is hit by fire, it'll run away and if the guard is hit by ice it'll freeze in place for 10 seconds. If the guard is frozen and hit by fire, it'll unfreeze and if the guard is running away on fire and then hit by an ice card then it'll stop running away
- The environment affects the AI. A bomb can be dropped by the player to explode and kill guards and the player can unfreeze the moat while the guards are on it to kill them
- **Polish:** *Mostly Achieved.*
 - Start Menu GUI: An interactive one. The player walks into a card that either lets him start the game, or quit it.
 - In-game pause: Press 'esc'. Can also exit the game from there.
 - There's no debug output.
 - There's no "god mode".
 - Environment Acknowledges Player:
 - Rabbits run away as the player approaches them in the beginning [scripted].
 - The bomb drops and explodes when the player burns the rope after getting the fire card.
 - Guards chase the player when they see him.
 - Crates fall when touched.
 - The bunnies run away from the player and into their holes.
 - Bunnies and guards run away from player when he uses the fire card on them.
 - Guards chase the player as he crosses the moat [scripted].
 - Dragon breathes fire on the player if it sees him.
 - The player can hit the bunny with cards even after he gets the card that the bunny has
 - There's a sound effect for almost every observable game event.
 - The game is stable on multiple versions of Unity, and both on Windows and Mac.

Deficiencies

- Illuso slides on the floor slightly when he starts moving, but he eventually picks up the pace.
- Illuso sometimes does the throwing animation without actually launching a card.
- The player's view cannot be changed. The camera is stuck looking at the player, and the only way to move the viewpoint is via the keyboard.
- The character's jump is only effective when he's moving. Otherwise, it is too low to be effective.

- Guard Animations aren't emotive, are lacking in inverse kinematics, and they do not have root motion
- Moat is a solid object, not actual fluid.
- The aesthetic is disjointed.
- When the player is killed by the dragon, the death UI appears multiple times and you have to click continue a few times before it goes away
- Walls and floors are a little glitchy where they overlap and the renderer doesn't know which one to render

Walkthrough

- Start up the game.
- Walk into the "Start" card.
- Walk forward until you reach the wooden fence.
- Go left.
- Go left.
- You'll find a few crates to the left. Walk through them.
- Go down the stairs.
- Pick up the "Jump" card.
- Use the "Jump" card to jump up the stairs.
- Go right.
- Jump up the stairs.
- Go up the ramp to the right.
- Pick up the "Fire" card.
- Use the "Fire" card to burn the rope and drop the crate of TNT on the guards.
- Or you can jump down, use the fire card on the guards
- Drop down.
- Burn the wooden fence.
- Jump over the lower metal fence.
- Walk back to the main area.
- Burn the wooden fence that doesn't lead to the moat.
- Walk into the rabbit area.
- Corner the big rabbit and touch him to gain the "Ice" card.
- You can use the fire and ice cards on the big and small rabbits to make them run away and freeze them in a block of ice, respectively.
- Go back to the starting corridor.
- Use the ice card to freeze the moat.
- Run over the moat.
- Guards will chase after you as soon as you cross the moat. Use the fire card to melt the moat while they're on it to drown them.

- Or turn around and hit the guard with fire and ice cards to make sure they don't catch you
- Use the fire or ice cards to temporarily light up the walls of the maze and solve it.
- Once you get past the maze and get the "Invisibility" card, use it to phase through the invisible walls.
- Go back to the gate.
- Go through the other side through the other gate.
- Before entering the last area, use the invisibility card, otherwise the dragon will burn you.
- Pass through the dragon and enter the antechamber.
- Pick up the key.
- Go back to the gate.
- Walk through the gate.

§ External resources used (should match with in-game credits)

External Resources

Package	Creator	Assets
Realistic Effects Pack 4	KRIPTO289	<ul style="list-style-type: none"> • Effect 23: The dragon's breath. • Effect 24: Illuso's Invisibility.
HEROIC FANTASY CREATURES FULL PACK Volume 1	PROTOFACTOR, INC	The Dragon
Ultimate Game Music Collection	John Leonard French	Background Music
Universal Sound FX	Imphenzia	All sound effects
Handpainted Keys	RoboCG	Key
Egyptian Tomb: Cat Statue	Nokobot	Pedestal the key's on
Basic Bandit	Will Morillas	Illuso
Magic Pack	Mixamo	Idle guard animation
Fire Explosion effects	Unity Asset Store	Bomb explosion
Medieval Fence Pack	ARTTI	Iron fences

Strong Knight	3D MAESEN	Guard model
Tiny Fire Asset Pack	TWELVE	Card Effects
Skeleton	Lugia Games	Skeletons in Maze
FullTiltBoogie Starter Particle Pack	FullTiltBoogie	Particle effects (steam, sparks)
Ice Materials	INDIECHEST	Ice materials, shader, animation file, and prefab.
Skybox Series Free	AVIONX	skybox

§ Who did what

Contributions

Name	Contributions
Abdurrahmane Rikli	<ul style="list-style-type: none"> • First level environment [full] [scrapped] • Invisibility ability • Dragon puzzle [full] • Blending of running and throwing animations • Signs
Matthew Redington	<ul style="list-style-type: none"> • Guard AI • Explosion effect for bomb • Ability to toggle moat between frozen and melted and make it kill the player and guards if they are on it and it is melted • Iron fence in first puzzle area • Pushable iron gates • Ability for guards to be affected by cards • Anything that affected the guards
Nathan Florez	<ul style="list-style-type: none"> • Rabbit puzzle in general • Rabbit fleeing logic (pathfinding and steering behavior)

	<ul style="list-style-type: none"> • Rabbits escaping through rabbit holes • Rabbit animations • Rabbit sound implementations • Initial freezing of the water (was altered later by a team member) • Implemented picking up the cards and registering them in the UI • Rabbit interactions with fire and ice cards • Initial jumping logic (was altered later by a team member) • Invisibility cooldown • Card Collector and Collectable Card Reporter logic • Rabbit maze puzzle design
Nick Saney	<ul style="list-style-type: none"> • All UI • Scene Handler • Git merging • Audio event manager • Start scene • Playtesting script writing • Documentation
Matthew Golino	<ul style="list-style-type: none"> • Overall Map/Level Design • Map Creation • Card Throwing and Impact • Jumping Puzzle Creation • TNT puzzle Creation and scripting • Invisible Maze Creation and scripting • Playtesting and playtest writeup • Game Pitch Presentation • Final Presentation
Allan Serna	<ul style="list-style-type: none"> • Illuso Animations • Guard Animations • Character controls and scripts • Character Design • Character concept design • Initial Throwing animation (was later altered) • Sound Implementation • Playtesting • Initial Illuso Game Idea

What Scene to Open In Unity

- 00_StartScene
- 01_LevelOne_merged