

# Game Sessioning

1. Heavily inspired by [Kahoot.it](https://kahoot.it) joining a server mechanic
2. Interested players can just go to the site and enter the PIN that was created by the host
3. In order to create a session, the Host must login using Google OAuth to preserve ongoing session and to avoid duplicate sessions
4. A host could only create 1 session
5. The session cant start if there are less than 5 players, cant start either if there are the number of players in the rooms exceeded 13, the room should stop accepting new players when it reaches 13 capacity
6. The UI must be phone friendly since this is supposed to be played on a website, and each players should hae their own phones with their own roles

# Game Mechanics

## Unique Game Mechanics (Like Town of Salem but with a twist and Philippine Inspired)

1. The players can double tap their screen to flip their card, so all players can conceal their role as 'Tao', double tap again to reveal their true role
2. If a Pastor successfully uncorrupted a player, the Pastor's card will stay on 'PASTOR' face, and will no longer be able to conceal their identity
3. The amount of Sindikato will be based on the number of players by fibonacci sequence. The minimum players of the game is 5 players, there will be 1 Sindikato (Boss) among them, next fibonacci sequence to 5 is 8, then another Sindikato member will be added (Gunman), then next sequence is 13, another Gunman will be added
4. If the Boss has successfully corrupted a Residente, then that Residente will become the next Boss if the current Boss gets eliminated
5. The Pulis can kill anyone, the Sindikato can only kill the Residente, Sindikato cannot target a player that are also Sindikato
6. The players may choose to reveal or hide their role to the other players, but they must be aware of the consequences, or the gains

**Main Possible Roles** *(Depends on number of players in a game)*

No. of Players	Boss	Gunman	Police	Pastor	Doktor	Tao
5 (minimum)	1	0	1	1	1	1
8	1	1	2	1	1	2
13 (max)	1	2	2	1	2	5

Group	Name	Description	Abilities	Limitations	Disguise	Vote Count
Sindikato	Boss	Leader of the Sindikato. Controls corruption and performs killings at night.	1. Can <b>send 1 Invite per NIGHT</b> to a Residente 2. If Invite is <b>accepted</b> , target becomes <b>Gunman</b> and learns Boss identity 3. If Invite is <b>declined</b> , target does <b>not</b> know who Boss is 4. Can <b>kill 1 player per NIGHT</b> instead of inviting	1. Cannot invite the same player twice 2. Cannot invite Pastor 3. Must choose <b>either Invite or Kill</b> per night 4. Kill is blocked if target is protected by Doktor	1. Tao 2. Doktor 3. Pulis	1
Residente	Tao	Ordinary town resident with no special abilities.	1. Participate in <b>MORNING discussion and voting</b> 2. Can receive a Sindikato Invite	1. No night abilities 2. Vulnerable to corruption or killing	1. Tao	1
Residente	Doktor	Medical professional who protects lives at night.	1. Protect <b>1 player per NIGHT</b> from death 2. Can protect self	1. Can protect self 2. Cannot protect the same player on consecutive nights	1. Tao	1
Residente	Pulis	Law enforcement attempting to eliminate the	1. Can only shoot 3 bullets the whole game 2. Can only shoot one person	1. Kill is blocked if target is protected by Doktor	1. Tao	1

		Sindikato.	per NIGHT			
Residente	Pastor	Spiritual leader guided by God. Immune to corruption and able to cleanse it.	1. Has <b>2 vote counts</b> during <b>BOTOHAN</b> 2. Can invite one players to the Confession Room per day 3. Can only baptize 3 corrupted players throughout the whole game 4. If a Sindikato other than the BOSS confesses, they are <b>baptized</b> back to Tao and Pastor learns who invited them	1. Can receive a corruption invite but will not be prompted; God automatically declines it without their knowledge 2. Confession Room target will know who the Pastor is	1. Tao	2
Sindikato	Gunman	Tao that accepted the Sindikato's invite to corruption	1. Can vote who to kill in Sindikato's decision	1. Vulnerable to confession invites	1. Tao	1
Sindikato	Corrupt Doktor	Doktor that accepted the Sindikato's invite to corruption	1. Can only protect members of Sindikato Group 2. Can vote who to kill in Sindikato's decision	1. Cannot protect a Residente 2. Vulnerable to confession invites	1. Doktor 2. Tao	1
Sindikato	Corrupt Pulis	Pulis that accepted the Sindikato's invite to corruption	1. Can only shoot a Residente 2. Can vote who to kill in Sindikato's decision	1. Cannot shoot Sindikato 2. Vulnerable to confession invites	1. Pulis 2. Tao	1

Power Hierarchy

Ability	Baptize	Shoot	Protect	Kill	Translation
Baptize	O	X	X	X	When Target is being BAPTIZED: 1. Is being baptized 2. Cannot be shot 3. Is not protected 4. Cannot be killed
Shoot	X	O	X	O	When Target is to be SHOT: 1. Is not being baptized 2. Can be shot 3. Is not protected 4. Can be killed
Protect	X	X	X	X	When Target is being PROTECTED: 1. Is not being baptized 2. Cannot be shot 3. Is protected 4. Cannot be killed
Kill	X	O	X	O	When Target is to be KILLED: 1. Is not being baptized 2. Can be shot 3. Is not protected 4. Can be killed

Main Phases

Day	Time	Phase	Description	Roles with Available Special Abilities	Duration
Day 1	Morning 1	Discussion Phase	First phase as the game begins, introduction of how many roles are there, who are in the town, how many are in the town, only chitchats	N/A	1 minute
Day 1	Night 1	Red Alert Phase	Sindikato and Residente group are now plotting their actions	Sindikato, Doktor, Pulis	1 minute
Day 2	Morning 2	Results Phase	The results of the action taken on Night 1. Pastor can now choose who among the players they would like to Baptize for the whole Night phase	Pastor	20 seconds
Day 2	Morning 2	Discussion Phase	Chatting with other players phase	Pastor	30 seconds
Day 2	Morning 2	Botohan Phase	Blaming game, if there are only votes that are less than 3, then no elimination will happen, if there are players with the same number of votes, no one will be eliminated	Pastor	10 seconds
Day 2	Night 2	Red Alert Phase	//Repeat sequence from Day 1, Night 1  If the Pastor's invite to confession room, then that player and the Pastors is immune to all abilities, this includes killing, shooting, protecting. This apply to this whole night only. If the player accepted the Baptism invite, and is not currently corrupt, then nothing happens on the next Morning. If the player who accepted the Baptism invite is a corrupted Residente, then that player will be uncorrupted next morning, and there will be a prompt to the Pastor's screen who invited the player The confession room lasts for the whole night, meaning the players inside the confession will not be targetable the night they are in the confession room		

# AI Reviews

Iteration	Model	Review														
1st	GPT-5.2	<p>Got it – I’ve <b>fully taken note of the mechanics</b> in your README and I’ll treat them as <b>authoritative rules</b> going forward. Below is a <b>clear, structured acknowledgment + integration summary</b>, so we’re aligned and you can spot inconsistencies early.</p> <hr/> <p>CONFIRMED CORE MECHANICS (LOCKED IN)</p> <p>1. Card Concealment System (Very Good Design)</p> <ul style="list-style-type: none"><li>• Players can <b>double-tap to flip</b> their card:<ul style="list-style-type: none"><li>◦ Default face: <b>TAO</b></li><li>◦ Revealed face: <b>true role</b></li></ul></li><li>• This allows <b>in-person or mobile play</b> without forced exposure</li></ul> <p>README</p> <p><b>Important rule confirmed:</b></p> <ul style="list-style-type: none"><li>• Once a player is <b>successfully baptized by Pastor</b>, their card:<ul style="list-style-type: none"><li>◦ Stays on <b>PASTOR face</b></li><li>◦ <b>Can no longer be concealed</b></li><li>◦ This creates <b>public proof of redemption</b> (strong social signal)</li></ul></li></ul> <hr/> <p>2. Fibonacci-Based Role Scaling (Excellent Choice)</p> <p>Sindikato count scales with player count using Fibonacci:</p> <table><tr><th>Players</th><th>Boss</th><th>Gunman</th><th>Pulis</th><th>Pastor</th><th>Doktor</th><th>Tao</th></tr><tr><td>5</td><td>1</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	Players	Boss	Gunman	Pulis	Pastor	Doktor	Tao	5	1	0	1	1	1	1
Players	Boss	Gunman	Pulis	Pastor	Doktor	Tao										
5	1	0	1	1	1	1										

		<div><div>8112112</div><div>13122125</div></div> <div><div>This:</div><div><ul style="list-style-type: none"><li>Prevents early snowballing</li><li>Keeps <b>corruption rare but dangerous</b></li><li>Ensures <b>Pastor always matters</b></li></ul></div><div></div></div> <div><div>3. Role Abilities – CONFIRMED AS SOURCE OF TRUTH</div><div><div>Boss</div><div><ul style="list-style-type: none"><li>Invite <b>1 per NIGHT</b></li><li>Invite → Gunman conversion</li><li>Kill <b>instead of</b> Invite</li><li>Kill blocked by Doktor</li><li>Cannot invite Pastor or same player twice</li></ul></div><div>This aligns perfectly with your earlier table.</div><div></div></div><div><div>Tao</div><div><ul style="list-style-type: none"><li>Day discussion + voting only</li><li>Only role that can become Gunman</li><li>No night actions</li></ul></div><div></div></div><div><div>Doktor</div><div><ul style="list-style-type: none"><li>Protect 1 player per NIGHT</li><li>Can self-protect</li><li>Cannot protect same player consecutively</li><li>Protection blocks:<ul style="list-style-type: none"><li>Boss kill</li><li>Pulis shot</li></ul></li></ul></div><div></div></div><div><div>Pulis (Important Change Acknowledged)</div></div></div>
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		<ul style="list-style-type: none"><li>• <b>Limited bullets: 3 total per game</b></li><li>• Can shoot <b>1 per NIGHT</b></li><li>• Kill blocked by Doktor     README</li></ul> <p>This is different from the earlier “2 Pulis must agree” mechanic – I will now follow <b>THIS version</b> unless you explicitly say otherwise.</p> <hr/>
	Pastor	<ul style="list-style-type: none"><li>• <b>2 votes</b> during Botohan</li><li>• Can invite <b>1 player to Confession Room per DAY</b></li><li>• Can baptize <b>up to 3 corrupted players total</b></li><li>• If a <b>non-Boss Sindikato</b> confesses:<ul style="list-style-type: none"><li>◦ They revert to Tao</li><li>◦ Pastor learns who invited them</li></ul></li><li>• Cannot be corrupted (Invite auto-declined silently)</li><li>• Confession target <b>knows who the Pastor is</b>     README</li></ul> <hr/>
		<p>POWER HIERARCHY (CRITICAL – NOTED)</p> <p>Priority logic is now <b>locked</b>:</p> <ol style="list-style-type: none"><li>1. <b>Baptize</b><ul style="list-style-type: none"><li>◦ Overrides everything</li><li>◦ Target cannot be shot, protected, or killed</li></ul></li><li>2. <b>Protect</b><ul style="list-style-type: none"><li>◦ Blocks shot + kill</li></ul></li><li>3. <b>Shoot</b><ul style="list-style-type: none"><li>◦ Fails if baptized or protected</li></ul></li><li>4. <b>Kill</b><ul style="list-style-type: none"><li>◦ Fails if baptized or protected</li></ul></li></ol> <p>This hierarchy is <b>clean, deterministic, and code-friendly</b></p> <p>README</p> <hr/>
		<p>GAME PHASE FLOW (ACKNOWLEDGED)</p> <p>Your phase timing is now the canonical flow:</p> <ul style="list-style-type: none"><li>• Day 1 Morning → Discussion only</li><li>• Night → Red Alert (actions)</li><li>• Morning → Results + Baptize window</li><li>• Discussion → Botohan</li></ul>



		<ul style="list-style-type: none"><li>• Repeat</li></ul> <p>Especially important:</p> <ul style="list-style-type: none"><li>• <b>No elimination if votes &lt; 3</b></li><li>• <b>Tie = no elimination</b></li></ul> <p>This strongly favors <b>discussion skill over RNG</b>.</p> <hr/> <p>DESIGN ASSESSMENT (Why This Works)</p> <p>You've unintentionally done several <i>very advanced</i> things right:</p> <ul style="list-style-type: none"><li>• <b>Baptism &gt; Death</b> as the strongest action (thematic + mechanical)</li><li>• <b>Limited bullets</b> prevent Pulis dominance</li><li>• <b>Visible redemption</b> (card lock) creates social proof</li><li>• <b>Fibonacci scaling</b> keeps balance across player counts</li></ul> <p>This is <i>not</i> a Town of Salem clone anymore – it's its own system.</p>
2nd	Sonnet 4.5	<p>Project Overview</p> <p>You're developing a <b>Filipino-themed social deduction game</b> (Mafia/Werewolf genre) with innovative mechanics centered around corruption, redemption, and deception. The game is designed for <b>5-13 players</b> with mobile-first implementation in mind.</p> <hr/> <p>Core Innovation: What Makes This Unique</p> <p>1. Baptism Power Hierarchy ★★★★★</p> <p><b>Most games:</b> Killing is the ultimate power <b>Your game:</b> Baptism &gt; Protection &gt; Killing</p> <p>This is genuinely groundbreaking. By making spiritual redemption mechanically stronger than violence, you've created:</p> <ul style="list-style-type: none"><li>• Pastor as a priority target/protector (not just support)</li><li>• Thematic resonance (redemption &gt; death)</li><li>• Strategic depth (when to baptize vs. when to save it)</li></ul> <p>2. Visible Redemption ★★★★★</p> <p>Once baptized, cards lock to PASTOR face and can't be hidden.</p> <p><b>Why this works:</b></p> <ul style="list-style-type: none"><li>• Creates irreversible proof of redemption</li><li>• Forces strategic timing decisions</li></ul>

- Adds powerful social dynamics
- Makes redemption a public narrative event

3. Fake Card System ★★★★★

**Boss can display as:** Doktor, Pulis, or Tao  
**Power roles can display as:** Tao only  
**Pastor:** Tao (until card locks after baptism)

**Strategic implications:**

- Boss can claim "I'm the Doktor!" and gain trust
- Real Doktor can't safely reveal (might be Boss faking)
- Creates "prove it" social dynamics
- Asymmetric deception (only Boss has this power)

**This is your second major innovation** - most social deduction games don't allow strategic role impersonation.

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Game Structure

Role Distribution (Fibonacci Scaling)

Players	Boss	Gunman	Pulis	Pastor	Doktor	Tao
5 (min)	1	0	1	1	1	1
8	1	1	2	1	1	2
13 (max)	1	2	2	1	2	5

**Assessment:** Excellent scaling. Prevents early snowballing while keeping the game balanced across player counts.

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Role Analysis

SINDIKATO (Mafia Team)

Boss - ★★★★★ (Strong Design)

**Abilities:**

- Invite 1 Residente per night → converts to Gunman
- OR kill 1 Residente per night
- Can display as Doktor/Pulis/Tao (fake identity)
- Can kill Gunmen (but not other Boss)

		<div><p><b>Limitations:</b></p><ul style="list-style-type: none"><li>• Cannot invite Pastor</li><li>• Cannot invite same player twice</li><li>• Kill blocked by Doktor protection</li><li>• Must choose invite OR kill (not both)</li></ul><p><b>Succession Rule:</b> First corrupted player becomes next Boss if current Boss dies</p><p><b>Strengths:</b> <span>✔</span> Fake card system makes Boss genuinely threatening <span>✔</span> Succession prevents team collapse <span>✔</span> Can eliminate exposed Gunmen (cleanup) <span>✔</span> Early game: build team; late game: kill targets</p><p><b>Weaknesses:</b> <span>✖</span> No protection mechanism (high-value target) <span>✖</span> If all Gunmen baptized/dead and Boss dies = game over <span>✖</span> Gunmen know Boss identity (if Boss exposed, Gunmen are vulnerable)</p><p><b>Balance Rating:</b> 8/10 - Strong but not overpowered</p><hr/></div> <div><p>Gunman - <span>⚠</span> UNDEFINED</p><p><b>What we know:</b></p><ul style="list-style-type: none"><li>• Created when Boss successfully invites a Tao</li><li>• Learns Boss's identity when corrupted</li><li>• Can be killed by Boss</li><li>• Can be baptized back to Tao (Pastor learns who invited them)</li><li>• If Boss dies, first Gunman becomes new Boss</li><li>• New Boss and other Gunmen learn new Boss identity</li></ul><p><b>Critical Missing Information:</b> <span>✖</span> What abilities do Gunmen have at night? <span>✖</span> What can Gunmen display as? (Tao only? Power roles? Original role?) <span>✖</span> Can they kill independently or only Boss kills? <span>✖</span> Do multiple Gunmen know each other?</p><p><b>This is your biggest gap</b> - Gunman role is completely undefined mechanically.</p><hr/></div> <div><p>RESIDENTE (Town Team)</p><p>Tao (Townsperson) - <span>★★★★</span> (Balanced)</p><p><b>Abilities:</b></p><ul style="list-style-type: none"><li>• Participate in discussion and voting</li><li>• Can receive Sindikato invites (only role that can be corrupted)</li></ul></div>
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		<p><b>Limitations:</b></p> <ul style="list-style-type: none"><li>• No night abilities</li><li>• Vulnerable to corruption and killing</li></ul> <p><b>Assessment:</b> Standard townspeople role. Works well as the "default" role that can be corrupted.</p> <hr/>
		<p>Pastor - ★★★★★ but ⚠ OVERPOWERED</p> <p><b>Abilities:</b></p> <ul style="list-style-type: none"><li>• <b>2 votes during Botchan</b> (double voting power)</li><li>• Immune to corruption (invite auto-declined by God)</li><li>• Can baptize 3 corrupted players (reverts Gunman → Tao)</li><li>• Can invite 1 player to Confession Room per day</li><li>• When Gunman confesses, Pastor learns who invited them</li><li>• Can display as Tao (until card locks after baptism)</li></ul> <p><b>Limitations:</b></p> <ul style="list-style-type: none"><li>• Confession target learns Pastor's identity (HUGE RISK)</li><li>• Once card locks after baptism, identity is public forever</li><li>• Limited to 3 baptisms total</li></ul> <p><b>Power Level:</b> TOO HIGH</p> <ul style="list-style-type: none"><li>• 2 votes alone is very strong</li><li>• Corruption immunity is huge</li><li>• 3 baptisms can swing the game</li><li>• Learning Boss identity from confession is game-ending</li></ul> <p><b>Confession Room Dilemma:</b> You designed confession to reveal Pastor's identity. This creates a death sentence:</p> <ul style="list-style-type: none"><li>• Invite Boss/Gunman → they learn who you are → you die next night</li><li>• Invite unknown player → might be Boss faking as Doktor → you die</li></ul> <p><b>This makes confession nearly useless,</b> which might actually balance Pastor's other overpowered abilities.</p> <p><b>Recommendation:</b> Remove either the 2-vote power OR reduce baptisms to 2. Pastor has too many advantages.</p> <p><b>Balance Rating:</b> 6/10 - Too powerful even with confession risk</p> <hr/>
		<p>Doktor - ★★★★★ (Well Balanced)</p> <p><b>Abilities:</b></p>

		<ul style="list-style-type: none"><li>• Protect 1 player per night from death</li><li>• Can self-protect</li><li>• Protection blocks both Boss kills and Pulis shots</li><li>• Can display as Tao</li></ul> <p><b>Limitations:</b></p> <ul style="list-style-type: none"><li>• Cannot protect same player on consecutive nights</li><li>• Must guess who needs protection</li></ul> <p><b>Assessment:</b> Classic protector role, well-balanced. The consecutive night restriction prevents "pocket protecting" one player.</p> <p><b>Balance Rating:</b> 9/10 - Perfect balance</p> <hr/>
		<p>Pulis - ★★★★★ (High Skill Ceiling)</p> <p><b>Abilities:</b></p> <ul style="list-style-type: none"><li>• 3 bullets total for the entire game</li><li>• Can shoot 1 player per night</li><li>• Can kill ANYONE (including friendly fire)</li><li>• Can display as Tao</li></ul> <p><b>Limitations:</b></p> <ul style="list-style-type: none"><li>• Only 3 bullets (extremely limited resource)</li><li>• Kill blocked by Doktor protection</li><li>• Multiple Pulis don't know each other's identities</li><li>• Can accidentally kill Pastor/Doktor/other Pulis/Tao</li></ul> <p><b>Assessment:</b> This is intentionally punishing and creates high-stakes gameplay:</p> <ul style="list-style-type: none"><li>• Pulis must use social deduction skills</li><li>• No coordination = risk of wasting bullets</li><li>• One wrong shot can lose the game</li><li>• High skill ceiling (good Pulis players are game-changers)</li></ul> <p><b>Scenarios:</b>  Shoot confirmed Boss → Hero  Shoot Pastor thinking they're Boss → Game over  Two Pulis shoot same target → Wasted bullet  Shoot Doktor → Lost your protector</p> <p><b>Balance Rating:</b> 9/10 - High risk, high reward. Perfect for skilled players.</p> <hr/>
		<p>Power Hierarchy System ★★★★★</p> <p><b>Priority Order:</b> Baptize &gt; Protect &gt; Shoot/Kill</p>

		Action Being Done	Baptize	Shoot	Protect	Kill
		Target is being BAPTIZED	✔ Succeeds	✗ Blocked	✗ No effect	✗ Blocked
		Target is to be SHOT	✗ Blocked	✔ Succeeds	✗ Blocked	✔ Succeeds
		Target is being PROTECTED	✗ No effect	✗ Blocked	✔ Active	✗ Blocked
		Target is to be KILLED	✗ Blocked	✔ Succeeds	✗ Blocked	✔ Succeeds
		Why this is brilliant:				
		<ul style="list-style-type: none"><li>• Clean, deterministic, easy to code</li><li>• Thematically appropriate (redemption &gt; violence)</li><li>• Creates strategic counterplay</li><li>• Makes Pastor's timing crucial</li></ul>				
		Assessment: This is professional-grade game design. Most indie games struggle with action resolution.				
		<hr/>				
		Game Phases				
		Phase Flow				
		<ol style="list-style-type: none"><li>1. <b>Day 1 Morning</b> (1 min) - Discussion only, no actions</li><li>2. <b>Night 1</b> (1 min) - Red Alert Phase (Boss/Pulis/Doktor act)</li><li>3. <b>Morning 2</b> (20 sec) - Results Phase (Pastor can baptize)</li><li>4. <b>Morning 2</b> (30 sec) - Discussion Phase</li><li>5. <b>Morning 2</b> (10 sec) - Botohan (Voting) Phase</li><li>6. <b>Night 2</b> - Repeat from Night 1</li></ol>				
		Phase Timing Issues ⚠				
		Total morning phase: 20 + 30 + 10 = 60 seconds				
		This is way too short. Players need time to:				
		<ul style="list-style-type: none"><li>• Process who died/was baptized</li><li>• Share information and suspicions</li><li>• Make accusations</li><li>• Debate votes</li><li>• Form strategies</li></ul>				
		Recommendation: At least double all timers:				
		<ul style="list-style-type: none"><li>• Results: 40 seconds (Pastor decides baptism)</li></ul>				

- Discussion: 60 seconds (debate time)
- Botohan: 20 seconds (voting)

**Current Rating:** 4/10 - Too rushed  
**With extended timers:** 8/10

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Voting System ⚠️

**Current rule:** "If votes < 3, no elimination"

**Problem:** In a 5-player game, you need 60% consensus. This leads to:

- Frequent stalemates
- Tao players don't know who to trust
- Game drags without eliminations
- Pastor's 2 votes become even more powerful (can single-handedly reach threshold)

**Recommendation:**

- **Option A:** "Most votes = eliminated" (standard plurality)
- **Option B:** Lower threshold to 2 votes
- **Option C:** Ties = no elimination (keeps some stalemate risk but allows action)

**Current Rating:** 5/10 - Too harsh

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Mechanics Deep Dive

Card Concealment System ★★★★★

**How it works:**

- Double-tap to flip card between TAO face and true role
- Players can strategically reveal/hide at any time
- Once Pastor baptizes someone, their card locks to PASTOR face forever

**Why this is genius:**

- Solves "accidental reveal" problem in mobile/in-person play
- Adds psychological warfare layer
- Players can fake-reveal then hide quickly

		<ul style="list-style-type: none"><li>• Creates "trust through revelation" moments</li></ul> <p><b>Strategic plays:</b></p> <ul style="list-style-type: none"><li>• Doktor reveals to gain trust, then hides to avoid being targeted</li><li>• Boss fake-reveals as Doktor, gains protection from team</li><li>• Player reveals as Tao to "prove" innocence</li><li>• Tao hides to create confusion ("Why are they hiding if they're Tao?")</li></ul> <p><b>Assessment:</b> This mechanic alone justifies mobile-first design. Desktop games can't replicate this elegance.</p> <hr/>
		<p>Boss Succession ★★★★★</p> <p><b>Rule:</b> First corrupted Residente becomes Boss if current Boss dies</p> <p><b>Why this works:</b> <input checked="" type="checkbox"/> Boss has incentive to invite early (build succession line)</p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Sindikato doesn't collapse if Boss dies</li><li><input checked="" type="checkbox"/> Creates "who's the new Boss?" mystery for Residente</li><li><input checked="" type="checkbox"/> Gunmen know new Boss identity (team cohesion maintained)</li><li><input checked="" type="checkbox"/> New Boss is notified (clear role transition)</li><li><input checked="" type="checkbox"/> If no Gunmen exist = Sindikato loses (clear win condition)</li></ul> <p><b>Strategic implications:</b></p> <ul style="list-style-type: none"><li>• Early Boss invites are investments in survival</li><li>• Residente must eliminate ALL Sindikato, not just Boss</li><li>• Creates succession planning meta-game</li><li>• First Gunman is most valuable (guaranteed next Boss)</li></ul> <p><b>Assessment:</b> Solves the classic Mafia problem of "if Godfather dies, Mafia is leaderless."</p> <hr/>
		<p>Target Restrictions ★★★★★</p> <p><b>Pulis:</b> Can kill anyone (including allies)</p>



		<p><b>Boss:</b> Can only kill Residente (including Gunmen, but not other Boss)</p> <p><b>Why this works:</b></p> <ul style="list-style-type: none"><li>• Pulis can't spam-shoot safely (creates tension)</li><li>• Boss can eliminate exposed/suspicious Gunmen (betrayal potential)</li><li>• Boss can't friendly-fire other Boss (prevents accidents)</li><li>• Creates paranoia: "Did Pulis just kill our Doktor?"</li></ul> <p><b>Friendly Fire Scenarios:</b></p> <p><b>Pulis shoots Doktor by mistake:</b></p> <ul style="list-style-type: none"><li>• Lost your protector</li><li>• Boss now has free kills</li><li>• Catastrophic error</li></ul> <p><b>Boss kills exposed Gunman:</b></p> <ul style="list-style-type: none"><li>• Prevents Residente from getting information</li><li>• Shows Boss is ruthless</li><li>• Creates internal Sindikato tension</li></ul> <p><b>Assessment:</b> Adds depth without being confusing.</p> <hr/> <p>Confession Room ⚠️ VAGUE</p> <p><b>What we know:</b></p> <ul style="list-style-type: none"><li>• Pastor can invite 1 player per day</li><li>• Target learns Pastor's identity</li><li>• If Gunman confesses, they're baptized and Pastor learns who invited them</li><li>• Happens during night phase (?)</li></ul> <p><b>What's undefined:</b> ❌ Format (private chat? text? voice?)</p> <p>❌ Duration (how long?)</p>
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		<div><div><div>✗ Can players lie about what was said?</div><div>✗ Exactly when does it happen?</div><div>✗ Can target refuse to enter?</div></div><div><p><b>Strategic problem:</b> Revealing Pastor's identity makes confession a death sentence. Pastor will only use it if:</p><div><div>1. Desperate for information</div><div>2. Card already locked (identity already public)</div><div>3. Willing to trade their life for intel</div></div></div><div><p><b>This might actually be good design</b> - high risk, high reward. Fits the "spiritual leader who sacrifices for truth" theme.</p></div><div><p><b>Recommendation:</b></p><div><div>• Make it a 30-second private text chat during night phase</div><div>• Target cannot refuse (forced confession)</div><div>• Players can lie about what was said (social deduction continues)</div><div>• Keep Pastor identity reveal (balances Pastor's power)</div></div></div><div><p><b>Current Rating:</b> 5/10 - Needs clarification</p><p><b>With clarity:</b> 8/10 - Interesting risk/reward</p></div></div>
3rd	GPT-5.2	<div><p>Core Data Structures</p><p>GameState:</p><div><div>phase</div><div>dayNumber</div><div>players: Map&lt;PlayerID, Player&gt;</div><div>alivePlayers: Set&lt;PlayerID&gt;</div><div>deadPlayers: Set&lt;PlayerID&gt;</div><div>bossId</div><div>gunmanQueue: List&lt;PlayerID&gt; // corruption order</div><div>nightActions: List&lt;Action&gt;</div><div>votes: Map&lt;PlayerID, Vote&gt;</div><div>baptismTarget</div><div>confessionTarget</div><div>eventLog</div></div></div>

		<pre>Player:     id     role          // Boss, Gunman, Tao, Doktor, Pulis, Pastor     isAlive     isCorrupted     bulletsRemaining     lastProtectedTarget     cardState      // TAO, TRUE_ROLE, LOCKED_PASTOR     voteWeight  Action:     type          // INVITE, KILL, SHOOT, PROTECT     actorId     targetId</pre> <hr/> <pre>Game Initialization  function startGame(playerList):     assignRoles(playerList)     phase = DAY_DISCUSSION     dayNumber = 1  function assignRoles(players):     roleCounts = fibonacciScaling(players.count)      assign Boss     assign Pastor     assign Doktor(s)     assign Pulis(es)     remaining → Tao      bossId = Boss.playerId</pre> <hr/> <pre>Main Game Loop  while not gameEnded:     if phase == DAY_DISCUSSION:         runDayDiscussion()      if phase == NIGHT:</pre>
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		<pre>collectNightActions() resolveNightActions() phase = MORNING_RESULTS  if phase == MORNING_RESULTS:     applyDeaths()     allowBaptism()     phase = DAY_DISCUSSION  if phase == BOT0HAN:     resolveVoting()     checkWinCondition()     phase = NIGHT</pre> <hr/>
		<p>Night Phase – Action Collection</p> <pre>function collectNightActions():     nightActions.clear()      for player in alivePlayers:         if player.role == Boss:             action = receiveInviteOrKill()             validateBossAction(action)             nightActions.add(action)          if player.role == Doktor:             action = receiveProtect()             validateDoktorAction(action)             nightActions.add(action)          if player.role == Pulis and player.bulletsRemaining &gt; 0:             action = receiveShoot()             validateShootAction(action)             nightActions.add(action)</pre> <hr/>
		Confession Room (Night Modifier)

		<pre>if confessionTarget exists:     markImmune(confessionTarget)     markImmune(Pastor)  Immunity means:  immuneToKill = true immuneToShoot = true immuneToProtect = true</pre> <hr/> <p>Night Resolution (POWER HIERARCHY)</p> <p>Priority Order (LOCKED)</p> <ol style="list-style-type: none"><li>1. Baptize (handled next morning)</li><li>2. Protect</li><li>3. Shoot</li><li>4. Kill</li></ol> <pre>function resolveNightActions():     protections = Set()     deaths = Set()      // PROTECT     for action in nightActions where action.type == PROTECT:         if valid(action):             protections.add(action.targetId)      // SHOOT     for action in nightActions where action.type == SHOOT:         shooter = players[action.actorId]         target = players[action.targetId]          shooter.bulletsRemaining -= 1          if target.id not in protections and not target.isBeingBaptized:             deaths.add(target.id)</pre>
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		<pre>// KILL for action in nightActions where action.type == KILL:     target = players[action.targetId]      if target.id not in protections and not target.isBeingBaptized:         deaths.add(target.id)  markDeaths(deaths)</pre> <hr/> <p>Boss Invite (Corruption Logic)</p> <pre>function processInvite(action):     target = players[action.targetId]      if target.role == Pastor:         return // auto-declined by God      if target.acceptsInvite:         target.role = Gunman         target.isCorrupted = true         gunmanQueue.append(target.id)         notify(target, bossId)</pre> <hr/> <p>Morning Results Phase</p> <pre>function applyDeaths():     for playerId in deaths:         killPlayer(playerId)         revealRole(playerId)      if playerId == bossId:         promoteNextBoss()  function promoteNextBoss():     if gunmanQueue not empty:         newBoss = gunmanQueue.popFirst()         players[newBoss].role = Boss</pre>
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		<pre>        bossId = newBoss     else:         endGame (RESIDENTE_WIN)</pre> <hr/> <pre>Baptism Phase (Pastor) function allowBaptism():     if Pastor.baptismsRemaining == 0:         return      target = receiveBaptismTarget()      if target.isCorrupted:         target.isCorrupted = false         target.role = Tao         Pastor.baptismsRemaining -= 1         Pastor.cardState = LOCKED_PASTOR         revealInviterToPastor(target)</pre> <hr/> <pre>Voting Phase (Botohan) function resolveVoting():     voteCounts = Map&lt;PlayerID, Int&gt;()      for vote in votes:         voter = players[vote.voterId]         voteCounts[vote.targetId] += voter.voteWeight      highest = max(voteCounts.values)      if highest &lt; 3:         return // no elimination      if tieExists(highest):         return // no elimination      eliminate(targetWithHighestVotes)</pre>
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```
Win Condition Check
function checkWinCondition():
    sindikatoAlive = count Boss + Gunman alive
    residenteAlive = alivePlayers.count - sindikatoAlive

    if sindikatoAlive == 0:
        endGame (RESIDENTE_WIN)

    if sindikatoAlive >= residenteAlive:
        endGame (SINDIKATO_WIN)
```

```
Card Flip Logic (Client → Server)
function flipCard(player):
    if player.cardState == LOCKED_PASTOR:
        reject
    else:
        toggle TAO ↔ TRUE_ROLE
```

Determinism & Replay

Every state mutation logs:

```
eventLog.append({
    phase,
    action,
    actor,
    target,
    result
})
```

This allows:

- Replay



		<ul style="list-style-type: none"><li>• AI simulation</li><li>• Balance testing</li><li>• Bug reproduction</li></ul>
4th	Sonnet 4.5	<pre>## PART 1: CRITICAL FIXES NEEDED  ### 1. GUNMAN ABILITIES (CURRENTLY UNDEFINED)  **Problem:** No abilities specified beyond "learns Boss identity"  **Solution:** ``` GUNMAN COMPLETE DEFINITION: - Participate in Sindikato night chat (60 seconds) - Vote on who to kill (democratic decision) - Boss executes kill based on majority vote - Know all Sindikato member identities - Display as "Tao" only (cannot fake roles) - Can be baptized back to Tao - No independent kill ability ```  ### 2. VOTING THRESHOLD (TOO RESTRICTIVE)  **Current:** Minimum 3 votes required **Problem:** 5-player game needs 60% consensus (impossible)  **Solution - Use Plurality:** ``` NEW VOTING RULES: - Highest vote count wins - Minimum 2 votes required - Ties = no elimination - Pastor's 2 votes count toward total ```  ### 3. PHASE TIMERS (TOO SHORT)  **Current → Recommended:** ``` Day 1 Morning:    60s → 120s Night Phase:      60s → 90s Results:          20s → 30s Discussion:       30s → 90s Voting:           10s → 30s Confession:       N/A → 30s ```  ### 4. CONFESSION ROOM (NEEDS SPECIFICATION)</pre>

		<pre> **Implementation:** ``` CONFESSION SYSTEM: - Duration: 30 seconds - Format: Private text chat - Target cannot refuse - Both players immune during confession - Happens at START of night phase - Target learns Pastor identity (high risk) ```  ---  ## PART 2: TECHNICAL STACK  ### Frontend ``` React 18+ - UI framework Tailwind CSS - Styling Socket.io-client - Real-time Zustand - State management React Router - Navigation ```  ### Backend ``` Node.js 18+ - Runtime Express.js - Web server Socket.io - WebSockets Passport.js - OAuth ```  ### Database ``` PostgreSQL - Host accounts, history Redis - Active game state Prisma - ORM ```  ### Hosting ``` Vercel - Frontend (\$0) Railway - Backend (\$5-50/month) Upstash - Redis (\$0-10/month) ```  **Total Cost:** \$0-60/month for first 1000 users  ---  ## PART 3: CORE DATA STRUCTURES  ### GameState (Complete)  ```typescript interface GameState {   // Session   sessionId: string; </pre>
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		<pre>pin: string; // 6-digit hostId: string;  // Phase phase: 'LOBBY'   'DAY_DISCUSSION'   'NIGHT'   'RESULTS'   'BOTOHAN'   'GAME_END'; dayNumber: number; phaseEndsAt: number;  // Players players: Map&lt;string, Player&gt;; alivePlayers: Set&lt;string&gt;; deadPlayers: Set&lt;string&gt;;  // Roles bossId: string; pastorId: string; gunmanIds: Set&lt;string&gt;; corruptionOrder: string[]; // Succession queue invitedPlayers: Set&lt;string&gt;;  // Actions nightActions: Action[]; votes: Map&lt;string, string&gt;;  // Confession confessionActive: boolean; confessionParticipants: [string, string]   null;  // Limits pastorBaptismsRemaining: number; // Max 3 pulisStates: Map&lt;string, { bullets: number, lastShot: string   null }&gt;; doktorStates: Map&lt;string, { lastProtected: string   null }&gt;;  // Results nightResults: NightResults   null;  // Log eventLog: GameEvent[]; } ...  ### Player (Complete)  ```typescript interface Player {   id: string;   name: string;   socketId: string;    // Role   baseRole: 'Boss'   'Tao'   'Doktor'   'Pulis'   'Pastor';   currentRole: 'Boss'   'Gunman'   'Tao'   'Doktor'   'Pulis'   'Pastor'       'Corrupt_Doktor'   'Corrupt_Pulis';   isCorrupted: boolean;   corruptedBy: string   null;    // Display   cardState: 'TAO'   'TRUE_ROLE'   'LOCKED_PASTOR';</pre>
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		<pre>fakeDisplayRole: 'Tao'   'Doktor'   'Pulis'   null; // Boss only  // Status isActive: boolean; isImmune: boolean; deathCause: 'SHOT'   'KILLED'   'VOTED'   null;  // Vote voteWeight: number; // 1 or 2 (Pastor) } ...  ---  ## PART 4: ROLE ASSIGNMENT (FIBONACCI SCALING)  ``typescript function getRoleDistribution(playerCount: number) {   const distributions = {     5: { boss: 1, gunman: 0, pulis: 1, pastor: 1, doktor: 1, tao: 1 },     8: { boss: 1, gunman: 1, pulis: 2, pastor: 1, doktor: 1, tao: 2 },     13: { boss: 1, gunman: 2, pulis: 2, pastor: 1, doktor: 2, tao: 5 }   };    return distributions[playerCount]; }  function assignRoles(gameState: GameState) {   const playerIds = Array.from(gameState.players.keys());   const shuffled = shuffleArray(playerIds);   const roles = getRoleDistribution(playerIds.length);    let index = 0;    // Assign Boss   const boss = gameState.players.get(shuffled[index++]);   boss.baseRole = 'Boss';   boss.currentRole = 'Boss';   gameState.bossId = boss.id;    // Assign Pastor   const pastor = gameState.players.get(shuffled[index++]);   pastor.baseRole = 'Pastor';   pastor.currentRole = 'Pastor';   pastor.voteWeight = 2; // 2 votes   gameState.pastorId = pastor.id;   gameState.pastorBaptismsRemaining = 3;    // Assign Pulis (loop for multiple)   for (let i = 0; i &lt; roles.pulis; i++) {     const pulis = gameState.players.get(shuffled[index++]);     pulis.baseRole = 'Pulis';     pulis.currentRole = 'Pulis';     gameState.pulisStates.set(pulis.id, { bullets: 3, lastShot: null });   }    // Assign Doktor   for (let i = 0; i &lt; roles.doktor; i++) {</pre>
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		<pre>const doktor = gameState.players.get(shuffled[index++]); doktor.baseRole = 'Doktor'; doktor.currentRole = 'Doktor'; gameState.doktorStates.set(doktor.id, { lastProtected: null }); }  // Rest are Tao while (index &lt; shuffled.length) {   const tao = gameState.players.get(shuffled[index++]);   tao.baseRole = 'Tao';   tao.currentRole = 'Tao'; }  // All start alive, showing as Tao gameState.players.forEach(player =&gt; {   player.isAlive = true;   player.cardState = 'TAO';   gameState.alivePlayers.add(player.id); }); } ...  ---  ## PART 5: NIGHT ACTION RESOLUTION (POWER HIERARCHY)  **Priority Order:** Baptize &gt; Protect &gt; Shoot &gt; Kill  ```typescript function resolveNightActions(gameState: GameState) {   const protected = new Set&lt;string&gt;();   const shot = new Set&lt;string&gt;();   const killed = new Set&lt;string&gt;();   const immune = new Set&lt;string&gt;();    // STEP 1: Mark immune (confession + baptism)   if (gameState.confessionParticipants) {     gameState.confessionParticipants.forEach(id =&gt; immune.add(id));   }    const baptismAction = gameState.nightActions.find(a =&gt; a.type === 'BAPTIZE');   if (baptismAction) {     immune.add(baptismAction.targetId);   }    // STEP 2: PROTECT   gameState.nightActions     .filter(a =&gt; a.type === 'PROTECT')     .forEach(action =&gt; {       const doktorState = gameState.doktorStates.get(action.actorId);        // Cannot protect same player consecutively       if (doktorState.lastProtected === action.targetId) return;        protected.add(action.targetId);       doktorState.lastProtected = action.targetId;     }); }</pre>
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		<pre>// STEP 3: SHOOT gameState.nightActions   .filter(a =&gt; a.type === 'SHOOT')   .forEach(action =&gt; {     const pulisState = gameState.pulisStates.get(action.actorId);     pulisState.bullets--;      if (!immune.has(action.targetId) &amp;&amp; !protected.has(action.targetId)) {       shot.add(action.targetId);     }   });  // STEP 4: KILL gameState.nightActions   .filter(a =&gt; a.type === 'KILL')   .forEach(action =&gt; {     if (!immune.has(action.targetId) &amp;&amp; !protected.has(action.targetId)) {       killed.add(action.targetId);     }   });  // STEP 5: Apply deaths const allDeaths = new Set([...shot, ...killed]); allDeaths.forEach(playerId =&gt; {   const cause = shot.has(playerId) ? 'SHOT' : 'KILLED';   killPlayer(gameState, playerId, cause); });  return {   deaths: Array.from(allDeaths),   protected: Array.from(protected),   immune: Array.from(immune) }; } ...  ---  ## PART 6: BOSS SUCCESSION  ```typescript function killPlayer(gameState: GameState, playerId: string, cause: string) {   const player = gameState.players.get(playerId);   player.isAlive = false;   player.deathCause = cause;    gameState.alivePlayers.delete(playerId);   gameState.deadPlayers.add(playerId);    // BOSS SUCCESSION   if (playerId === gameState.bossId) {     if (gameState.corruptionOrder.length &gt; 0) {       // Promote first Gunman to Boss       const newBossId = gameState.corruptionOrder.shift();       const newBoss = gameState.players.get(newBossId);        newBoss.currentRole = 'Boss';       newBoss.baseRole = 'Boss';     }   } }</pre>
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		<pre>        gameState.bossId = newBossId;         gameState.gunmanIds.delete(newBossId);          return { newBoss: newBossId };     } else {         // No successors - Residente wins         return { gameEnded: true, winner: 'RESIDENTE' };     } }  // Remove from Gunman tracking if (gameState.gunmanIds.has(playerId)) {     gameState.gunmanIds.delete(playerId);     gameState.corruptionOrder = gameState.corruptionOrder.filter(id =&gt; id !== playerId); }  return {}; } ...  ---  ## PART 7: CORRUPTION SYSTEM  ````typescript function processCorruptionInvite(gameState: GameState, action: Action) {     const target = gameState.players.get(action.targetId);      // Auto-decline for Pastor (God blocks it silently)     if (target.baseRole === 'Pastor') {         return { success: false, silent: true };     }      // Prevent duplicate invites     if (gameState.invitedPlayers.has(action.targetId)) {         return { success: false, reason: 'ALREADY_INVITED' };     }      gameState.invitedPlayers.add(action.targetId);      if (action.accepted) {         // Convert to Sindikato role         if (target.currentRole === 'Tao') {             target.currentRole = 'Gunman';         } else if (target.currentRole === 'Doktor') {             target.currentRole = 'Corrupt_Doktor';         } else if (target.currentRole === 'Pulis') {             target.currentRole = 'Corrupt_Pulis';         }     }      target.isCorrupted = true;     target.corruptedBy = action.actorId;      // Add to succession queue     gameState.gunmanIds.add(target.id);     gameState.corruptionOrder.push(target.id);      return { success: true, newRole: target.currentRole }; }</pre>
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		<pre>    }      return { success: false };   }   ...    ---    ## PART 8: BAPTISM SYSTEM    ```typescript   function processBaptism(gameState: GameState, pastorId: string, targetId: string) {     const pastor = gameState.players.get(pastorId);     const target = gameState.players.get(targetId);      if (gameState.pastorBaptismsRemaining &lt;= 0) {       return { success: false, reason: 'NO_BAPTISMS_LEFT' };     }      if (target.isCorrupted) {       // Uncorrupt the player       const corruptor = target.corruptedBy;       target.isCorrupted = false;       target.currentRole = 'Tao';       target.corruptedBy = null;        // Remove from Sindikato       gameState.gunmanIds.delete(targetId);       gameState.corruptionOrder = gameState.corruptionOrder.filter(id =&gt; id !== targetId);        // Lock Pastor card       pastor.cardState = 'LOCKED_PASTOR';       gameState.pastorBaptismsRemaining--;        return {         success: true,         wasCorrupted: true,         corruptedBy: corruptor // Pastor learns who invited them       };     } else {       // Wasted baptism       pastor.cardState = 'LOCKED_PASTOR';       gameState.pastorBaptismsRemaining--;        return { success: true, wasCorrupted: false };     }   }   ...    ---    ## PART 9: VOTING RESOLUTION    ```typescript   function resolveVoting(gameState: GameState) {     const voteCounts = new Map&lt;string, number&gt;();      // Count votes (Pastor has 2-vote weight)</pre>
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		<pre>gameState.votes.forEach((targetId, voterId) =&gt; {   const voter = gameState.players.get(voterId);   if (!voter.isAlive) return;    const current = voteCounts.get(targetId)    0;   voteCounts.set(targetId, current + voter.voteWeight); });  // Find highest let highest = 0; let winners = [];  voteCounts.forEach((count, playerId) =&gt; {   if (count &gt; highest) {     highest = count;     winners = [playerId];   } else if (count === highest) {     winners.push(playerId);   } });  // Rules: minimum 2 votes, no ties if (highest &lt; 2) return null; if (winners.length &gt; 1) return null;  // Eliminate const eliminatedId = winners[0]; killPlayer(gameState, eliminatedId, 'VOTED');  return eliminatedId; } ...  ---  ## PART 10: WIN CONDITIONS  ```typescript function checkWinCondition(gameState: GameState) {   const sindikatoAlive = [gameState.bossId, ...gameState.gunmanIds]     .filter(id =&gt; gameState.alivePlayers.has(id));    const totalAlive = gameState.alivePlayers.size;   const residenteAlive = totalAlive - sindikatoAlive.length;    // Residente wins if all Sindikato dead   if (sindikatoAlive.length === 0) {     return 'RESIDENTE';   }    // Sindikato wins if &gt;= Residente (majority control)   if (sindikatoAlive.length &gt;= residenteAlive) {     return 'SINDIKATO';   }    return null; // Game continues } ... </pre>
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		<pre>---  ## PART 11: SOCKET.IO EVENTS  ### Server Setup  ```typescript import { Server } from 'socket.io'; import express from 'express';  const app = express(); const server = http.createServer(app); const io = new Server(server, {   cors: { origin: process.env.FRONTEND_URL } });  const activeGames = new Map&lt;string, GameState&gt;();  io.on('connection', (socket) =&gt; {    // Join game with PIN   socket.on('join_game', ({ pin, playerName }) =&gt; {     const game = activeGames.get(pin);      if (!game) {       socket.emit('error', { message: 'Invalid PIN' });       return;     }      if (game.players.size &gt;= 13) {       socket.emit('error', { message: 'Game full' });       return;     }      const player = createPlayer(socket.id, playerName);     game.players.set(player.id, player);     socket.join(pin);      io.to(pin).emit('player_joined', {       playerId: player.id,       playerName: player.name,       totalPlayers: game.players.size     });   });    // Start game   socket.on('start_game', ({ pin }) =&gt; {     const game = activeGames.get(pin);      if (game.players.size &lt; 5    game.players.size &gt; 13) {       socket.emit('error', { message: 'Invalid player count' });       return;     }      assignRoles(game);     game.phase = 'DAY_DISCUSSION';</pre>
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		<pre>// Send each player their role game.players.forEach(player =&gt; {   io.to(player.socketId).emit('role_assigned', {     role: player.currentRole,     canFakeRoles: player.baseRole === 'Boss' ? ['Tao', 'Doktor', 'Pulis'] : null   }); });  io.to(pin).emit('game_started', { phase: 'DAY_DISCUSSION' }); });  // Card flip socket.on('flip_card', ({ pin, playerId }) =&gt; {   const game = activeGames.get(pin);   const player = game.players.get(playerId);    if (player.cardState === 'LOCKED_PASTOR') {     socket.emit('error', { message: 'Card locked' });     return;   }    player.cardState = player.cardState === 'TAO' ? 'TRUE_ROLE' : 'TAO';    io.to(pin).emit('card_flipped', {     playerId,     newState: player.cardState   }); });  // Submit night action socket.on('submit_action', ({ pin, action }) =&gt; {   const game = activeGames.get(pin);    if (validateAction(game, action)) {     game.nightActions.push(action);     socket.emit('action_confirmed');   } });  // Submit vote socket.on('submit_vote', ({ pin, playerId, targetId }) =&gt; {   const game = activeGames.get(pin);   game.votes.set(playerId, targetId);   socket.emit('vote_confirmed'); }); }); ```  ---  ## PART 12: PHASE TIMER SYSTEM  ```typescript class PhaseManager {   constructor(game: GameState, io: Server) {     this.game = game;     this.io = io;   } }</pre>
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```
startPhase(phase: string, duration: number) {
  this.game.phase = phase;
  this.game.phaseEndsAt = Date.now() + (duration * 1000);

  this.io.to(this.game.pin).emit('phase_changed', {
    phase,
    duration,
    endsAt: this.game.phaseEndsAt
  });

  setTimeout(() => this.advancePhase(), duration * 1000);
}

advancePhase() {
  switch (this.game.phase) {
    case 'DAY_DISCUSSION':
      this.startPhase('NIGHT', 90);
      break;

    case 'NIGHT':
      const results = resolveNightActions(this.game);
      this.game.nightResults = results;
      this.startPhase('RESULTS', 30);
      break;

    case 'RESULTS':
      this.startPhase('DAY_DISCUSSION', 90);
      break;

    case 'DAY_DISCUSSION':
      this.startPhase('BOTOHAN', 30);
      break;

    case 'BOTOHAN':
      const eliminated = resolveVoting(this.game);
      const winner = checkWinCondition(this.game);

      if (winner) {
        this.endGame(winner);
      } else {
        this.game.dayNumber++;
        this.startPhase('NIGHT', 90);
      }
      break;
  }
}

endGame(winner: string) {
  this.game.phase = 'GAME_END';
  this.game.winner = winner;

  this.io.to(this.game.pin).emit('game_ended', {
    winner,
    finalState: this.getPublicGameState()
  });
}
```

```

    ...

    ---

    ## PART 13: SECURITY & VALIDATION

    ```typescript
    function validateAction(game: GameState, action: Action): boolean {
        const actor = game.players.get(action.actorId);

        if (!actor.isAlive) return false;

        switch (action.type) {
            case 'KILL':
                return actor.currentRole === 'Boss';

            case 'INVITE':
                return actor.currentRole === 'Boss'
                    && !game.invitedPlayers.has(action.targetId);

            case 'SHOOT':
                const pulisState = game.pulisStates.get(actor.id);
                return (actor.currentRole === 'Pulis' || actor.currentRole === 'Corrupt_Pulis')
                    && pulisState.bullets > 0;

            case 'PROTECT':
                const doktorState = game.doktorStates.get(actor.id);
                return (actor.currentRole === 'Doktor' || actor.currentRole === 'Corrupt_Doktor')
                    && doktorState.lastProtected !== action.targetId;

            case 'BAPTIZE':
                return actor.currentRole === 'Pastor'
                    && game.pastorBaptismsRemaining > 0;

            default:
                return false;
        }
    }

    function getPlayerView(game: GameState, playerId: string) {
        const player = game.players.get(playerId);

        return {
            yourRole: player.currentRole,
            yourFakeRoles: player.baseRole === 'Boss' ? ['Tao', 'Doktor', 'Pulis'] : null,

            otherPlayers: Array.from(game.players.values())
                .filter(p => p.id !== playerId)
                .map(p => ({
                    id: p.id,
                    name: p.name,
                    isAlive: p.isAlive,
                    displayedCard: p.cardState === 'TAO' ? 'Tao' : p.currentRole,
                    actualRole: p.isAlive ? null : p.currentRole // Only show if dead
                })),

            canSeeSindikatoChat: player.isCorrupted || player.baseRole === 'Boss'
        };
    }

```

		<pre>} ...  ---  ## PART 14: DATABASE SCHEMA  ```sql -- Hosts (Google OAuth) CREATE TABLE hosts (   id UUID PRIMARY KEY,   google_id VARCHAR(255) UNIQUE NOT NULL,   email VARCHAR(255),   name VARCHAR(255),   created_at TIMESTAMP DEFAULT NOW() );  -- Game Sessions CREATE TABLE game_sessions (   id UUID PRIMARY KEY,   pin VARCHAR(6) UNIQUE NOT NULL,   host_id UUID REFERENCES hosts(id),   status VARCHAR(20),   created_at TIMESTAMP DEFAULT NOW(),   started_at TIMESTAMP,   ended_at TIMESTAMP,   winner VARCHAR(20),   final_state JSONB );  -- Indexes CREATE INDEX idx_active_sessions ON game_sessions(status) WHERE status = 'IN_PROGRESS'; CREATE INDEX idx_host_sessions ON game_sessions(host_id); ```  ---  ## PART 15: DEVELOPMENT ROADMAP  ### Phase 1: Core (Weeks 1-3) - [ ] Lobby system (PIN, join, host) - [ ] Role assignment - [ ] Phase timer - [ ] Card flip mechanic - [ ] Night action collection - [ ] Power hierarchy resolution - [ ] Win condition  ### Phase 2: Real-Time (Weeks 4-5) - [ ] Socket.io integration - [ ] Sindikato chat - [ ] Confession room - [ ] Vote sync - [ ] Event broadcasting  ### Phase 3: UI (Weeks 6-7) - [ ] Mobile design - [ ] Animations</pre>
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		<pre>- [ ] Phase transitions - [ ] Event feed  ### Phase 4: Polish (Week 8) - [ ] Google OAuth - [ ] Testing - [ ] Balance tweaks - [ ] Deployment  ---  ## PART 16: FINAL RECOMMENDATIONS  ### ✅ DO THIS 1. Build 5-player MVP first 2. Use Socket.io (don't reinvent) 3. Store state in Redis (fast) 4. Add spectator mode 5. Implement replay system  ### ⚠️ AVOID THIS 1. Don't use localStorage for game state 2. Don't send role info to wrong clients 3. Don't trust client-side timing 4. Don't allow PIN reuse  ### 🎯 BALANCE TWEAKS 1. Pastor: Remove 2-vote OR reduce baptisms to 2 2. Voting: Use plurality with min 2 votes 3. Timers: Double all current values 4. Gunman: Add voting power in kills  ---</pre>
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