All Aboard!

A loopy whodunnit by friendshaped



Problem domain Solution	3
Game Concept	3
Game mechanics and goals Flowchart of game loop Player Motivations and goals	4 4 4
Setting Theme	5 5 5
Story Progression Timeline (what happened before the game begins) Game Opening The main game Ending	5 5 6 6 6
Player character NPCs Conductor The Stowaway/Doctor Lady Mortimer The Steward Inspector Sands	7 7 8 8 10 12 14
Art Style	18
Music and Sounds	18
Technical Design Documentation	18
Testing Plan	19
Project management	19
Marketing Accessibility Motor Cognitive Vision Hearing	20 20 21 21 21 21
Release	21
Further development	21

Problem domain

There's a lack of replayable narrative games.

Target audience is people who want to explore a complex game but may only have 10 minutes to sit down and play at a time.

Solution

All Aboard is a replayable narrative game built around the concept of time loops. It is designed to be played through multiple times, with each run revealing new information to the player and providing an interesting new experience based on what actions they take.

Game Concept

Points to refer back to:

- Wholesome
- No fighting mechanics
- Keep it low stakes
- Character development interesting and varied NPCs with unique unlockable dialogue
 - NPCs should inhabit the world not just be in it
 - NPCs develop relationships with other NPCs

Based on classic murder mystery stories such as Murder on the Orient express, the player finds themselves trapped on a moving train where a body has been found. Their goal is to find out who killed them.

If developed further, player could have smaller missions, for example:

- Find the murder weapon
- Unlock new areas
- Find proof

These subtasks allow the game to be easily extendable and provide more content for more playthroughs.

Player actions are:

- Moving between carriages
- Have conversations with characters
 - Character driven story NPCs should inhabit the world fully
- For further development: Pick up items and add them to inventory
 - Inventory has one special slot items stored there remain when the day resets

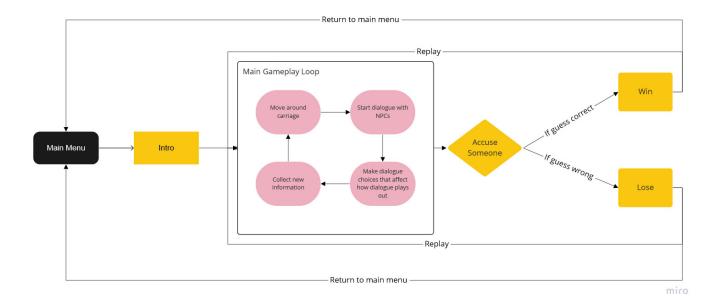
Player has a limited number of actions they can take before the end of the loop is

reached.

When they reach this number of actions, they must use the information they found to pick you they think committed the murder.

Game mechanics and goals

Flowchart of game loop



- Gameplay consists of exploring the train, talking to people to gain new information, and using that new information to get different information from the other characters.
- Can easily re-enter the main game loop without going through the main menu and intro again by choosing the replay option in both the main game scene and in the win and lose scenes.

Player Motivations and goals

Short term:

- Learn more about characters
- Explore the world

Long term:

- Figure out who committed the murder
- Uncover all of the secrets in the world
- Find a way to discover all secrets in a single 'perfect run'.

Story

Setting

The game is set on a train travelling cross-country. Not much is revealed about the rest of the world, but it is set in an alternative universe with a mixture of historical and steampunk inspired themes.

This is the explanation for the time loop phenomenon in this world, and also why the case is being handled by a random person rather than proper law enforcement.

Theme

Classic murder mystery inspired storyline, with lots of interlocking characters with their own motivations and secrets that fit together to create the story as a whole. Each character fits a distinct stereotypical role within the story - the bumbling detective, the mean-spirited old lady, and so on.

Story Progression

Timeline (what happened before the game begins)

The setting:

Night 1 of a train to Edinburgh. No stops along the way.

The murder:

- 20:13 Everyone except the Steward and Conductor are in the dining car. The passengers are socialising and the waiter is serving drinks. The Conductor is locked in the locomotive, driving the train and the Steward is in the staff car.
- 20:20 The player has started arguing with passengers.
- 20:41 Stowaway is pilfering through cabins. They take an inscribed pocket watch from the Inspector's room.
- 21:59 Doctor leaves to go to their cabin.
- 22:06 Stowaway is trapped in the Doctor's cabin as they return.
- 22:08 Inspector leaves to go to their cabin, in the direction of the Doctor.
- 22:18 Assassin leaves to go to their cabin, on the other side of the train.
- 22:21 Train goes through a tunnel
- 22:59 Player leaves
- 23:23 Assassin climbs onto the roof of the train and makes their way to the toilet nearest the Doctor's cabin.
- 23:46 Train goes through a tunnel and Assassin shoots Doctor in the back (silenced gun) in the Doctor's cabin.
- 23:48 Assassin goes to the toilet near the cabins. They lock the door. Climbs out of the window ontop of the train, stashes the murder weapon on the roof and moves to their window.
- 00:01 The stowaway, who has been trapped inside a closet in the Doctor's cabin since the Doctor came back, steals the identity of the Doctor.

00:24 - Steward is in the staff quarters. Sees the Stowaway through a window, disguised as the Doctor, moving something large.

00:32 - Stoctor has moved the body, disguised as the Stowaway, to the dining car.

00:38 - Steward sees Stoctor return to their cabin, without anything.

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----- GAME BEGINS -----
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The player character sees a blurred flashback. They are in a heated argument with another passenger, but it is impossible to tell who it is. Just as the argument looks as though it is getting aggressive, the player wakes up in their cabin by loud knocking on their door.

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----- LOOP BEGINS -----
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06:45 - KNOCK KNOCK. Player is awoken by Inspector knocking at their door.

07:00 - All passengers and staff (except Conductor, who is speaking over an intercom) have gathered in the dining car over the body.

07:01 - Conductor says the train will not stop until Edinburgh is reached, where the authorities will be waiting.

07:03 - Passengers disperse except the Inspector and Doctor who discuss the body.

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----- LOOP ENDS -----
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15:07 - Train enters the final tunnel. The loop restarts.

Game Opening

Set the scene - a few lines explaining the setting, what's happened, and what the player needs to do.

For further development this could be conveyed with a cutscene.

The main game

The main game lasts until the train reaches the next tunnel, as shown by the slider at the bottom of the screen. When the tunnel is reached, the game resets back to the menu screen, players can replay from the start again.

Gameplay in each loop consists of:

- Moving between carriages
- Talking to characters branching dialogue, changes based on how you respond, what you already know

Ending

At the end of each loop the player gets a chance to accuse someone.

The player is told whether they correctly guessed the murderer, and is given a list of subgoals based on other information they found out that loop.

Characters

Player character

Story Relevance	Player
Appearance/ Inspiration	
Notes	CyborgTravelling on the train as a passenger
Motivations	 Wants to figure out who did the murder Wants to understand what happened

NPCs

Conductor

Name	The Conductor	
Pronouns	She/her	
Appearance/ Inspiration		
Personality	 Chipper Enthusiastic Quirky Think's she's a sailor Wears a little hat Wants to be called Captain 	
Notes	Drives the trainLocked in the engine room	
Motivations	 Wants to maintain the good reputation of the train Wants justice to be served properly 	
Secrets	Hiding pet cat (Turnip) with them in the engine room	

Dialogue Planning

• WHAT HAPPENED LAST NIGHT?

'From what I heard you guests had a.. Shindig? I was stuck driving, all I know is that the trains booze supplies took quite a hit, which tends to bring out the worst in people.'

WHODUNNIT?

- 'I don't know, but whoever it is will be dealt with when we arrive, you have my word.'
- If you haven't talked to steward yet, they add = 'talk to someone who was more in the action. Maybe the Steward - he's a good lad, a little odd perhaps but I trust his opinion fully.'

SECOND STOWAWAY?

If asked nicely - no clue soz

- If asked in an accusing way 'how dare you! I run a tight ship, that wouldn't happen!'
- SOMEONE UP AFTER BED
 - No clue i have to drive the train remember :/
- STOCTER REVEALED!
 - Ah. How... odd. Stowaways are so... unusual on trains.
 - Can ask if this happens a lot = 'well, to be honest, I had a feeling someone may have snuck on at the last station. I tend to let them be, it's often just people who can't afford a ticket and are desperate, but if I knew he'd been stealing I never would have looked the other way, trust you me!'
 - Can suggest they snuck the stowaway on and helped them =
 'How dare you accuse me of such a thing! I love this train and
 this company like it's my own family, I would never dishonor
 them like that! ESPECIALLY if you are suggesting I helped
 them MURDER someone!'

SANDS IS SUS?

 'Eh I doubt it. I think he talks the talk but isn't smart, mean, or strong enough to manage something like murder.'

• LADY IS SUS?

- What do you think of the lady? = she's always travelling the country on the trains, most of my colleagues know her well. A bit rude but she has big bucks from her deceased husband so no one complains.
 - Do you think she could have something to do with this? = no way, look at her! Plus with that obnoxious bird on her head always screeching there's no way she's sneaking around the corridors unnoticed in the dead of night. And her cabin is right next to the engine and I swear I can hear it through the walls! It was quiet for maybe an hour from 10.30 last night and thats it.
 - What happened to her husband? = we don't pry or she would make our lives hell. But looking at her, i think its a pretty safe bet that he was just old and kicked the bucket, don't you?

CONDUCTOR IS SUS?

 IM LITERALLY DRIVING THE TRAIN THIS IS MY WHOLE JOB I CAN'T JUST LEAVE FOCUS ON THE INVESTIGATION YOU PLEB

The Stowaway/Doctor

Name	The Stowaway/Doctor
Pronouns	They/Them
Appearance/ Inspiration	
Personality	 Quiet Reserved Vague Talks a lotta shit, especially when pretending to be the doctor
Notes	Is a stowaway pretending to be the doctorPetty criminal, has been robbing passengers
Motivations	Wants to avoid getting in trouble
Secrets	Is the stowawayHas been stealing

Dialogue Planning

- WHAT HAPPENED LAST NIGHT?
 - Says they left dining cart at certain time, doesnt mention who left before/other passengers
- WHO DUNNIT?
 - If claiming doctor say it was probably a medical issue not a murder (which is silly because bullet wound)

If stoctor - not sure, could be anyone - as stowaway they know
 there are ways to get around unseen other than the main corridors

SECOND STOWAWAY?

- if still claiming to be doctor they act sus and say 'oh yeah probably a big family operation'
- If discovered as stowaway: they say no, by themselves, not enough room on these things for multiple stowaways

• SOMEONE UP AFTER BED?

- They say they had a bag of medical journals taking up space on the bed that they moved to the dining cart in order to sleep
 - Player can say it sounds odd and no journals were found, they get flighty and shrug it off.
 - Player can suggest it was a body this makes them fess up to being the stowaway but they didn't kill anyone. Hid in closet while murder happened, took place of doctor and removed body. (STOCTOR REVEALED prompt unlocked)

SANDS IS SUS?

- If doctor nah seems like a good man of the law i love the law and following it :-)
- If stowaway Hm. he's a bit of an idiot for someone who see's himself as a crack detective he never got anywhere near discovering me.

CONDUCTOR IS SUS?

- If claiming doctor nah they seem legit and the carriage is so far away from the engine how could they have got there unseen?
- If stowaway I guess they could have used some of the...alternative routes to travel the train that I discovered - being a conductor they certainly know the train well enough. But I don't think they're a baddie - I've certainly never heard the staff speak ill of their boss which says a lot.

LADY IS SUS?

- If claiming doctor 'well, not to speak ill, but as a doctor I can tell she takes medication that can cause violent outbursts... bit sus' odd, just because he's a doc how would he know her meds?!
- If stowaway idk but she's been really mean to me since I started pretending to be the doctor. Bit of a bitch.

Lady Mortimer

Name	The Lady Mortimer (the murderer!)
Pronouns	She/her
Appearance/ Inspiration	
Personality	 Rude Knows better than everyone else Thinks herself better than others Looks down on the staff
Notes	 An assassin! Committed the murder as a contract No one suspects her - been getting away with these things for years Pet bird on her head
Motivations	Wants to get away with murder
Secrets	Is an assassin

Dialogue Planning

- WHAT HAPPENED LAST NIGHT?
 - Left dining cart opposite direction to sands and doctor player saw
- WHODUNNIT?
 - 'I dread to think of it, god rest his soul.' wipes away a tear that isn't there and walks away
- SECOND STOWAWAY?

- suggests that the staff change so frequently, could easily sneak someone on board
- SOMEONE UP AFTER BED?
 - Nah i need my sleep and to comfort mr lionel
- STOCTER REVEALED!
 - Well there we go, what a terrible lie, he must be the murderer!
 - Probably has an acomplice in the staff that snuck him in.
 someone higher up havent heard much from the conductor,
 ey? (CONDUCTOR SUS? Prompt unlocked)
- SANDS IS SUS?
 - Hm... guess he was in the cart next to the victim, and it would explain why such a 'good PI' somehow has no clue how the murder occured under his nose...
- LADY IS SUS?
 - Ask where she was at the time she says she was up late in her bedchambers tending to her bird
 - Ask if it was her she looks mad but acts kind and feeble, plays up the old lady couldn't hurt nobody card

The Steward

Name	The Steward	
Pronouns	She/they	
Appearance/ Inspiration		
Personality	 Bored Lazy worker - wants to do as little as possible to get by Teenage angst vibes 	
Notes	Works on the trainKnows all of the passengers relatively well	
Motivations	Honestly doesn't care what happens as long as they don't get fired	
Secrets	Takes naps in the staff room	
Dialogue Planr	ning	
 WHAT HAPPENED LAST NIGHT? Says he didn't see anything Can let it be - ends dialogue Can suggest he's hiding something: Once threatened that he's covering something up he admits to napping on the job. Was awoken from a nap by a loud noise - must have been birds on the roof cawwing. 		

 Saw someone after everyone else went to bed but didn't want to ruin passenger privacy. Maybe hint that people need privacy for many reasons - affairs, older folk health issues, business (SOMEONE UP AFTER BED prompt unlocked)

WHO DUNNIT?

 Thinks it must have been someone in the same sleeping cart as the doctor - only doctor and sands were seen there (SANDS IS SUS prompt unlocked)

SECOND STOWAWAY?

 Probably not, but then again, didn't think there would be one in the first place

STOCTER REVEALED!

0 -

SANDS IS SUS?

- If stoctor revealed = 'well sands was the only one other than the stowaway in that part of the train, and I didn't see anyone from the front of the train pass me by.'
- Else = no clue he does tend to stay up late in the dining cart where the body was found looking out wistfully and making 'hmm' noises, but I don't know when he went to bed last night'

CONDUCTOR IS SUS?

- Nah they're a good person and a solid boss, they wouldn't hurt a fly.
 - Can ask how long they've worked together = 'almost a year now - they have their quirks and I had heard some horror stories about not being able to keep staff around for long, but I've always enjoyed working here. They make it fun, ya know?'
 - Can suggest they're covering for the conductor = 'what a ridiculous thing to say! This job doesn't pay well enough to buy my silence on something like this!' Storms off

LADY IS SUS?

 nah - one of the other waiters tried to deliver her pre-sleep lemon tea and she was already conked out and didn't answer the door, couldn't have been her.

Inspector Sands

Name	The Inspector Sands
Pronouns	He/Him
Appearance/ Inspiration	
Personality	 Sure of himself Proud Easy flustered when questioned
Notes	 Thinks he'll solve the case Dodgy PI Everyone thinks hes a bit of a joke
Motivations	Wants to solve the mystery but has no idea how to go about it so kind of just faffs about
Secrets	He's bad at his job and his business is failing.
Dialogue Plann	ing

Dialogue Planning

WHAT HAPPENED LAST NIGHT?

- Knows there was a murder because he found the body (which was dressed as a stowaway)
- o Doesn't know when it took place
- Saw the doctor leaving to go to their cabin just before he returned to his cabin in the same direction - player saw this too

WHO DUNNIT?

- Thinks there must be a second stowaway hiding because 'its always the spouse!' (SECOND STOWAWAY prompt unlocked)
 - Can say thats ridiculous = makes him scoff and start rambling and saying it was probably you all along
 - Can agree and say it's a great idea = 'you've got a good head on you, I knew I liked you! I'll remember that, I've got yer back lad' ominous but nice nonetheless

SOMEONE UP AFTER BED?

 Nah id know if someone was up doing things - crime never sleeps and never do i but if i did sleep i wouldnt sleep through that

STOCTER REVEALED!

 Nah no way the doctor was being impersonated. I can tell when people are lying, im a good detective. The old lady, on the other hand... something sus there. (LADY IS SUS? Prompt unlocked)

SANDS IS SUS?

- If stoctor hidden You were the last one known to be in the area the doctor was = doesn't realise you're suggesting him, just agrees and talks nonsense about the timeline
- If stoctor revealed the stoctor said footsteps approached from the butt of the train (direction of sands bed and the bathroom) someone snuck in to doctors carriage and shot them. Sounds like you = how dare you try and tarnish my reputation! Gets all mad and starts accusing anyone, shifting the blame

CONDUCTOR IS SUS?

- If youve already suggested that hes sus = ah yes it could be them, no one even knows that they look like, the perfect plan!
- Otherwise = nah im pretty sure they need to drive the train. I mean, its not like they can just leave the engine alone, especially on a complicated journey like this! (this doesn't make sense because its a non stop journey. hm. could be conductor after all.)

Art Style

Key points for our visual direction are:

- Hand-drawn
- Cosy
- Steampunk

This is further explored in our moodboards, available within the documentation > Project Documents folder or online here:

https://miro.com/app/board/uXjVOYDwjpg=/?invite_link_id=719836130183

Music and Sounds

- Music changes based on who the player talks to character driven
 - Steward slow, sleepy
 - o Inspector old school suspense
 - o Lady Mortimer prim and proper
 - o Doctor reserved, slightly creepy
 - o Conductor jolly nautical
- Old school jazz
 - o Find free open source don't make our own
- Foley sound effects to make interactions more impactful
 - Steampunk inspired mechanical sound effects to go alongside UI actions
 - Generic 'talking' noises when you talk to characters

Technical Design Documentation

Tools/Packages used

Name	Version	Use
Unity Engine	2020.3 LTS	Main development in the latest LTS version of Unity to ensure stability
Ink Unity Integration	1.0.0	Allows us to write branching dialogue in Inkle Studios Ink language and easily implement in our Unity project
TextMeshPro	3.0.6	Unity Package for better display of text in the UI - especially important for a word-based game
2D Sprite	1.0.0	Unity Package to allow editing of sprite asset properties such as borders - especially useful for sliced UI elements
Universal Render Pipeline	10.7.0	Unity's prebuilt scriptable render pipeline. It provides artist-friendly workflows.
Input System	1.2.0	Unity's new input system which is more customizable than the

		built in legacy input system in UnityEngine.Input.
Inky	0.12.0	https://github.com/inkle/inky/releases/tag/0.12.0 Editor for ink, Inkle's markup language for writing interactive narrative in games.
Procreate	5.2.0	Graphics editor application for digital painting - used for character art

Coding/Version Control Practises

- Naming of functions and variable in camel case, eg playerMovementController
- Appropriate comments throughout codebase
- All work to be done in separate branch off of main and merged back into main upon completion
- If merge errors occur open a Pull Request in Browser and handle manually
- Pull requests to be reviewed by another member of the team

Testing Plan

As a team we are relatively inexperienced with narrative design, so we made this the focus for our user testing.

Following our planning of characters and dialogue styles, we wrote some demo dialogue in inky with a basic mystery. This focused on presenting the different NPCs in our world, giving them unique 'voices', and allowing users to make judgements about them.

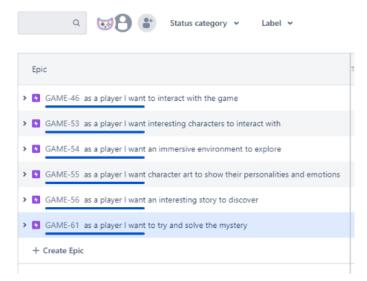
The full write up of our testing plan, results, and analysis is available in the Documentation>Project documents folder.

Project management

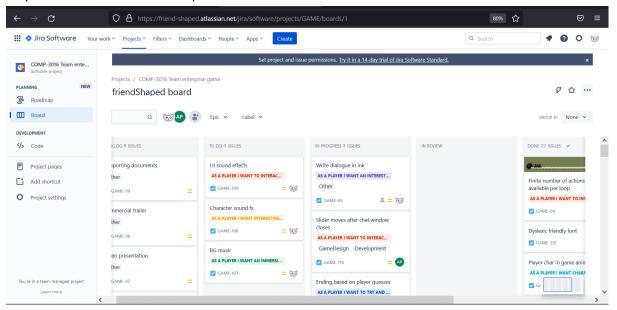
We work in two week agile sprints for this project, organised in Jira.

We populate the backlog with tasks as a team, identify tasks to work on each sprint, and move them to the appropriate column in our Kanban board to reflect their progress.

Roadmap



Each task is assigned an epic. These epics are high-level user needs, as shown below. By organising tasks in this way, we maintain a clear vision and ensure that all work we do helps deliver the desired experience to our users.



The meeting records from our sprint planning and review sessions are available in the Documentation > Project Documents folder.

(Our Jira should be accessible from the projectLinks.txt file within the Project Documents folder, but there may be issues with permissions. If this is the case, there is a full CSV printout exported from our Jira available in the same folder which contains details on all of the tasks and their subtasks created for this project as of 13/01/22)

Marketing

Accessibility

Due to time constraints, we weren't able to have as many customisable options for accessibility. To combat this, we've aimed to make the standard game as accessible as

possible following the Game Accessibility Guidelines. (https://gameaccessibilityguidelines.com/basic/)

Motor

- Interactive elements are large and well spaced.
- Controls are as simple as possible.

Cognitive

 Allow the game to be restarted without the need to navigate through multiple levels of menus.

Vision

- No essential information is conveyed through colour alone.
- Simple clear text formatting a dyslexic friendly font, OpenDyslexia, is used for all text in the game.

Hearing

• No essential information conveyed by sounds alone.

either our itch page or directly from our team website.

Release

We've decided to release All Aboard as an Alpha version. This is because we want to continue to develop it and add new features in future modules.

We're releasing it as a PC build for Mac and Windows, available for download from

Further development

We aim to revisit this project and develop it further for a proper commercial release. Some of the elements we could develop further include:

- Adding items items in the environment could be picked up by the player and either used in game, such as a key in a lock, or to unlock different dialogue options.
- More complex accusations users must choose a murder weapon when they
 accuse a character, in order to add complexity to gameplay and avoid players
 randomly guessing who did it without any real information.
- More areas to explore players could explore all of the different areas currently represented with doors, such as the bathrooms, bedchambers, and staff quarters. These areas could be harder to access, and provide further clues for players to figure out what happened.