

Extra Requirements

User Requirements

1. The player must be able to watch a 'replay' of their game.
2. The player must be able to add new tracks to the map.
3. The player must be able to remove existing tracks from the game.
4. The player must be able to buy connections made of different materials.
5. The player must be able to view their 'owned' connections.
6. Players must pay 'rent' to travel opposing players' tracks.
7. The player must be able to repair damaged tracks that they own.

System Requirements

1. The system must allow the player to select the option of watching a 'replay' of their game.
2. The system must be able to show a 'replay' of the players' game, such that all of the players' actions are viewable (like in a record-and-playback mode).
3. The system must show the 'replay' in faster-than-real-time.
4. The system must allow players the option to add new tracks.
5. The system must recognise new tracks as being part of the traversable map.
6. The system must allow players the option to remove existing tracks.
7. The system must recognise these removed tracks as being no longer part of the traversable map.
8. The system will not allow the removal of a track whilst a train is travelling across it.
9. The system must provide the user with a series of different material options for tracks these wish to build.
10. The system must make these materials have different costs for the same distance where, the better the material, the higher the cost.
11. The system will display the users 'owned' tracks.
12. The system must charge a player if they travel an opponent-owned track.
13. The system must inflict damage to a user-owned track that has been travelled across.
14. The system must decrease the speed of trains travelling across damaged tracks.
15. The system must provide players with the option to repair a track; the price of the repair is dependent upon the length and the material of the track.
16. The system must allow players to update tracks that they own to a 'higher' material: gold>silver>bronze. This is done by paying a price, determined upon length and material of the track.
17. The system must repair a track to full health if it is upgraded.
18. The system must make tracks of different lengths cost different amounts, where the largest distance has the highest cost.

Constraints

1. The player must only be able to buy one track every turn.
2. The player will be provided with \$500 at the start of the game to make buying tracks possible.
3. The player will gain \$100 every turn.
4. Original map tracks are 'fixed'. They are all 'gold' and cannot be removed. They take no damage and charge no rent.
5. Gold tracks do not take damage from the travelling of trains over them.
6. Player made tracks cannot cross over existing tracks.
7. Player made tracks cannot cross large bodies of water.