SE@M SimTool

Discrete Event Simulation

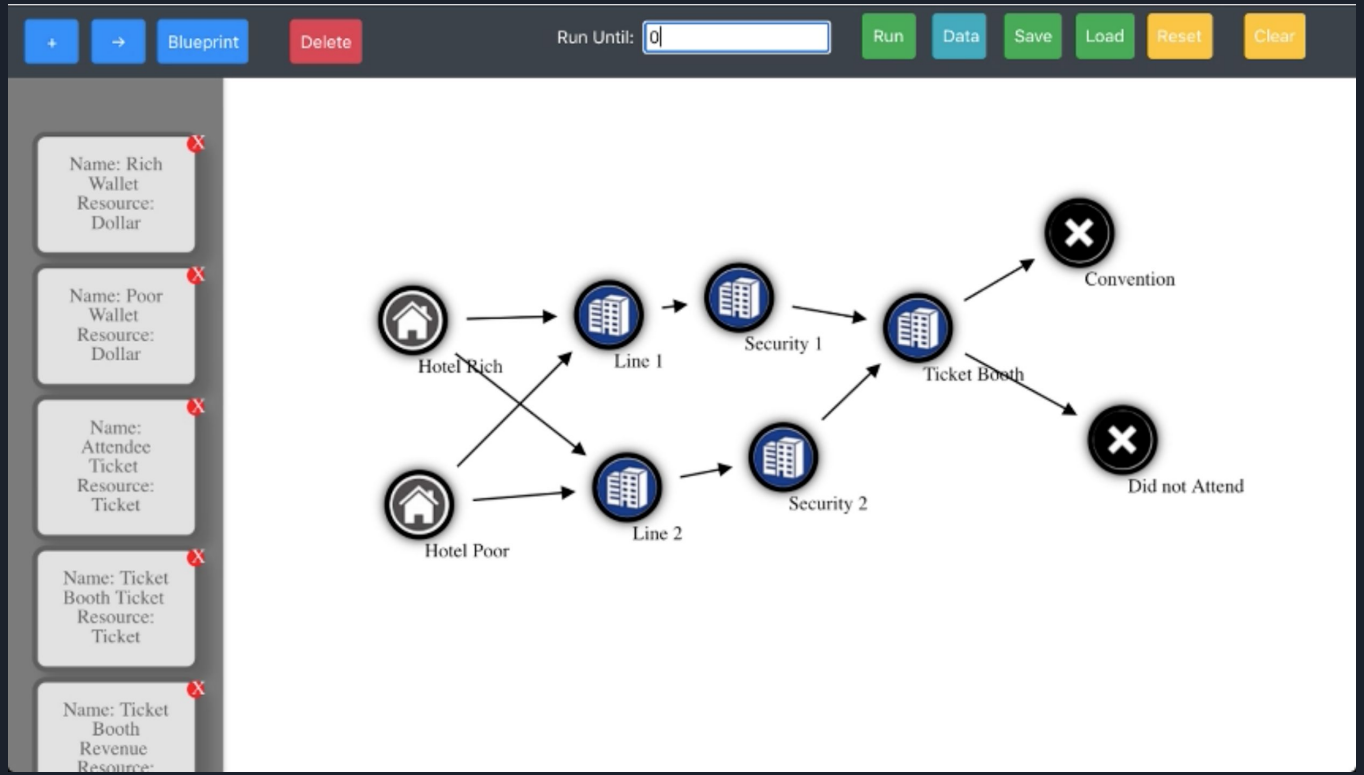
Aviv Elazar-Mittelman
Sofie Gonzalez
Thong Do

Project Summary

SimTool is an open-source discrete-event simulation tool built for small organizations and businesses to simulate potential scenarios in their workflows and make meaningful decisions

Quick way to simulate events, actions, assembly line

User Interface



Simulation Components: Nodes

- Start Point - Where entities enter into the simulation like people and material
- Station - Where events or actions can occur
- End Point - Final destination for things traveling through the simulation

Start Node

Station Node

End Node

Containers

A holder for a specific type of resource. Can hold up to a specific quantity or be of unlimited size. Any station or entity can hold a container.

Ex. A ticket booth will have a money container to hold their revenue. Convention attendees would have containers representing their wallets.

Blueprints

Blueprints are used to quickly create containers with the same settings.

They can be assigned as many time as user want to the start and station nodes

Two nodes can use the same blueprint to make two different containers

Logic

To control the behavior of each point in the simulation, conditions and actions can be added.

Conditions can verify a list of requirements to decide where entities should go.

Actions can move resources between containers.

Demo of the Simulation

This simulation will simulate different attendees of a convention

Two category of entities:

- Wealthy
- Poor

Assumption:

Wealthy people are more willing to enter the convention even if price is high but there is a chance they they will not attend

Regular people may enter convention even if price is high but there is a lower probability of entering than wealthy people