# System Name Actor-Based Design

## Team

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## Actors

Specify the design of your actors using as many copies of the following table as necessary.

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| --- | --- | --- | --- |
| **Name:** Baggage Scanner/Passenger Scanner | | | |
| **State information (What does the actor know?):**   * What line it’s in * Who the security system is | | | |
| **Responsibilities (What does the actor do?):**   * Scans a passenger/bag and fails them randomly * Informs security of the result | | | |
| **Messages Received** | | | |
| **Message class** | **Sender** | **Contents** | **Resulting action or effect** |
| CheckBaggage/CheckPassenger | DocumentCheck | Passenger | Scans person or bags |
| Close | DocumentCheck |  | Closes the scanner |
| **Messages Sent** | | | |
| **Message class** | **Recipient** | **Contents** | **Purpose and trigger** |
| BaggareReport/PassengerReport | Security | Passenger, passed | Informs security about the results of the inspection |
| Close | Security |  | Informs security that this scanner is done. |

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| --- | --- | --- | --- |
| **Name:** DocumentCheck | | | |
| **State information (What does it know?):**   * Scanner lines * Jail * Next line to send passengers to | | | |
| **Responsibilities (What does it do?):**   * Checks documents * Directs passenger to a line * Closes scanners | | | |
| **Messages Received** | | | |
| **Message class** | **Sender** | **Contents** | **Impact or effect** |
| Passenger | Main | Passenger | Checks passenger’s docs and sends them to a line |
| Close | Main |  | Shuts down the station |
| **Messages Sent** | | | |
| **Message class** | **Recipient** | **Contents** | **Purpose and trigger** |
| CheckBaggage/CheckPassenger | Baggage/Passenger Scanner | Passenger | Directs scanner to scan the given passenger |
| Close | Baggage/Passenger Scanner |  | Tells the scanner to shut downs |

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| --- | --- | --- | --- |
| **Name:** Jail | | | |
| **State information (What does it know?):**   * Number of lines * Who’s in jail * Lines that have been closed | | | |
| **Responsibilities (What does it do?):**   * Jails people * Arranges permanent detention at the end of the day * Shuts down system | | | |
| **Messages Received** | | | |
| **Message class** | **Sender** | **Contents** | **Impact or effect** |
| Passenger | Security | Passenger | Jails passenger |
| Close | Security |  | Shuts down the jail and the system |
| **Messages Sent** | | | |
| **Message class** | **Recipient** | **Contents** | **Purpose and trigger** |
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| --- | --- | --- | --- |
| **Name:** Security | | | |
| **State information (What does it know?):**   * What line it’s in * Jail * Passengers and their results * Scanners that closed | | | |
| **Responsibilities (What does it do?):**   * Collects scan results and sends the passenger to jail * Closes lline | | | |
| **Messages Received** | | | |
| **Message class** | **Sender** | **Contents** | **Impact or effect** |
| Passenger/Baggage Report | Passenger/Baggage Scanner | Passenger | Checks the result and denies entry to anyone who fails |
| Close | Passenger/Baggage Scanner |  | Shuts down the station |
| **Messages Sent** | | | |
| **Message class** | **Recipient** | **Contents** | **Purpose and trigger** |
| Passenger | Jail | Passenger | Jails passenger |
| Close | Jail |  | Tells the jail this line has shut down |

## Actor Collaboration Diagram

Notes:

* [N] means N copies of the indicated actor, where N is an integer.
* [\*] is zero of more, [+] is one or more
* Actors can be circles, ellipses, or rounded-corner rectangles – but be consistent!
* Messages sent as responses are shown with dotted lines, physically close to the triggering message.
* Use whatever drawing tool you are most familiar with, then copy and paste the actor collaboration diagram