

**ShipIT, An Interoffice Shipping Application**CS633 Software Quality, Testing and Security Management  
**Data Driven Combinations—Version 1.0**Group #6  
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## Data Driven Combinations

There aren’t very many different combinations of data/actions contained within ShipIT. While the following list may not be a very real world example, due to the number of invalid combinations, the information demonstrates the overall process.

For this analysis, the following combinations were used.

| Role | Activity | Entries |
| --- | --- | --- |
| Shipper/Receiver | Track Shipments | Valid |
| Courier | Create a Shipment | Invalid |
| Receiver | Edit a Shipment |  |
| Admin | Update Status |  |
|  | Cancel a Shipment |  |
|  | Print a Shipment |  |
|  | Save Data |  |
|  | Employee Management |  |
|  | Courier Management |  |

A full matrix of all combinations would generate 4 x 9 x 2 = 72 different pairings. Running this information through AllPairs, reduced the number of combinations by 50% to 36.

| Role | Activity | Entries |
| --- | --- | --- |
| Shipper/Receiver | Track Shipments | Valid |
| Courier | Track Shipments | Invalid |
| Shipper/Receiver | Create a Shipment | Invalid |
| Courier | Create a Shipment | Valid |
| Receiver | Edit a Shipment | Valid |
| Admin | Edit a Shipment | Invalid |
| Receiver | Update Status | Invalid |
| Admin | Update Status | Valid |
| Shipper/Receiver | Cancel a Shipment | Valid |
| Courier | Cancel a Shipment | Invalid |
| Shipper/Receiver | Print a Shipment | Invalid |
| Courier | Print a Shipment | Valid |
| Receiver | Save Data | Valid |
| Admin | Save Data | Invalid |
| Receiver | Employee Management | Invalid |
| Admin | Employee Management | Valid |
| Shipper/Receiver | Courier Management | Valid |
| Courier | Courier Management | Invalid |
| Receiver | Track Shipments | ~Valid |
| Admin | Track Shipments | ~Invalid |
| Receiver | Create a Shipment | ~Invalid |
| Admin | Create a Shipment | ~Valid |
| Shipper/Receiver | Edit a Shipment | ~Invalid |
| Courier | Edit a Shipment | ~Valid |
| Shipper/Receiver | Update Status | ~Valid |
| Courier | Update Status | ~Invalid |
| Receiver | Cancel a Shipment | ~Valid |
| Admin | Cancel a Shipment | ~Invalid |
| Receiver | Print a Shipment | ~Invalid |
| Admin | Print a Shipment | ~Valid |
| Shipper/Receiver | Save Data | ~Invalid |
| Courier | Save Data | ~Valid |
| Shipper/Receiver | Employee Management | ~Valid |
| Courier | Employee Management | ~Invalid |
| Receiver | Courier Management | ~Valid |
| Admin | Courier Management | ~Invalid |

Note, the values in the Entries column above that are preceded with at tilde (~) are entries that do not matter because all of the pairings needed to satisfy the test criteria have already been done. Additionally, invalid combinations (either due to access constraints or invalid operations) are highlighted in orange. By removing these invalid combinations, the test set is further reduced to 23 combinations, a 32% reduction from the full matrix.

| Role | Activity | Entries |
| --- | --- | --- |
| Shipper/Receiver | Track Shipments | Valid |
| Shipper/Receiver | Create a Shipment | Invalid |
| Admin | Edit a Shipment | Invalid |
| Receiver | Update Status | Invalid |
| Admin | Update Status | Valid |
| Shipper/Receiver | Cancel a Shipment | Valid |
| Courier | Cancel a Shipment | Invalid |
| Shipper/Receiver | Print a Shipment | Invalid |
| Courier | Print a Shipment | Valid |
| Receiver | Save Data | Valid |
| Admin | Save Data | Invalid |
| Admin | Employee Management | Valid |
| Receiver | Track Shipments | ~Valid |
| Admin | Create a Shipment | ~Valid |
| Shipper/Receiver | Edit a Shipment | ~Invalid |
| Courier | Edit a Shipment | ~Valid |
| Courier | Update Status | ~Invalid |
| Admin | Cancel a Shipment | ~Invalid |
| Receiver | Print a Shipment | ~Invalid |
| Admin | Print a Shipment | ~Valid |
| Shipper/Receiver | Save Data | ~Invalid |
| Courier | Save Data | ~Valid |
| Admin | Courier Management | ~Invalid |