# Specification

## Description

The parcel delivery tracking application will allow users across multiple levels of privilege to create, update, view, and cancel deliveries of one or more parcels per order. It will allow updates to the parcels and orders as well as deletion of parcels no longer being sold, and the ability to view metrics of each driver’s total deliveries and average time to complete statistics.

## User types

1. Guest
   1. Can register a new recipient account
   2. Can log into an existing account
2. Recipient (The person who receives the parcel)
   1. Can view their orders
   2. Can drill down to view progress of a specific order
3. Seller (The person who originally owns the parcel and is sending to the recipient)
   1. Can manage parcels and orders
   2. Can view statistics of driver performance
4. Driver (The person who transports the parcel from Seller to Recipient)
   1. Can record progress of deliveries

## Entities

1. Parcel (A single item being sold)
   1. Id, name, type, weight, sellerId, dateAdded, dateModified, timesSold
2. Order (A group of 1 or more parcels with delivery instructions to a single recipient)
   1. Id, recipient, seller, driver, dateAdded, dateCompleted, completedBy, isCompleted
3. Transaction (An action completed against an order, including “Picked up”, “Dropped off”)
   1. Id, orderId, name, addedBy, dateAdded
4. User (A collection of user details including username, shipping address)
   1. Id, firstName, lastName, username, hashedPassword, dateAdded, dateModified, address, town, county, postcode, email, phoneNo, isActive
5. Role (A role is applied to each user to determine permissions within the application, default to recipient, this is fixed within the system and cannot be modified)
   1. Id, name, isActive

## Use cases:

1. **Guest** can create account that has recipient privileges
2. **Guest** can login with an existing account
3. **Recipient** can view recipient deliveries where they are the recipient
4. **Recipient** can view delivery progress when they are the recipient
5. **Driver** can view all deliveries
6. **Driver** can add transaction
7. **Driver** can remove transaction
8. **Seller** can create parcel
9. **Seller** can edit parcel
10. **Seller** can delete parcel
11. **Seller** can create order
12. **Seller** can edit order
13. **Seller** can delete order
14. **Seller** can view driver metrics including count of deliveries and average times per driver