# Specification

## Description

The parcel delivery tracking application will allow users across multiple levels of privilege to create, update, view, and cancel deliveries with the option for multiple 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 statistics for total deliveries and average time to complete in days.

## User types

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

## Entities

1. Parcel (A single item being sold)
    a. Id, name, type, weight, sellerId, dateAdded, dateModified
2. Order (A group of parcels with delivery instructions to a single recipient)
    a. Id, recipient, seller, driver, dateAdded, dateCompleted, completedBy, isCompleted
3. Transaction (An action completed against an order, including "Picked up", "Dropped off")
    a. Id, orderId, name, addedBy, dateAdded
4. User (A collection of user details including username, shipping address)
    a. 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)
    a. Id, name, isActive

## Use cases:

1. **Guest** can register an account with default, recipient privileges
2. **Guest** can login with an existing account
3. **Recipient** can view recipient orders where they are the recipient
4. **Recipient** can view order progress when they are the recipient
5. **Driver** can view all orders
6. **Driver** can view order progress
7. **Driver** can add transaction
8. **Driver** can remove transaction
9. **Seller** can view all orders
10. **Seller** can view order progress
11. **Seller** can view all parcels
12. **Seller** can view parcel details
13. **Seller** can create parcel
14. **Seller** can edit parcel
15. **Seller** can delete parcel
16. **Seller** can create order
17. **Seller** can edit order
18. **Seller** can delete order
19. **Seller** can view driver metrics including count of orders and average days to complete per driver
20. **Seller** can add parcel to order
21. **Seller** can view all users
22. **Seller** can view user details