**Problem Domain Analysis**

**Green: Entity and attributes (Noun)**

**Red: Relationship (Verbs & Adverbs)**

**Scenario:**

1. Umbrella Corporation has a **branch office** in each office in each state throughout Malaysia. Each branch office is **allocated** **employees**. The data describing the branch office includes a unique **branch number, address (street, city, and postcode), and telephone numbers** (up to a maximum of three).
2. **Employees** with the role of Supervisor are responsible for an **allocated** group of employees called Assistants (up to a maximum of 3, at any one time). Not all employees are **assigned** to a supervisor. The data stored regarding each employee includes **employee id, name, address, position, salary, the assigned supervisor** (where applicable), and the details of the branch office at which the employee is currently working. The **employee number** is unique across all branches of Umbrella Corporation.

1. Each branch office **offers** a range of **properties for rent.** The data stored for each property includes **property id, address (street, city, and postcode), type, number of rooms, monthly rent, and the details of the property owner**. **The property number** is unique across all branch offices. The management of a property is assigned to an employee whenever it is rented out or requires to be rented out. An employee may manage a maximum of 10 properties for rent at any one time. Currently, the Umbrella Corporation Company is managing 30 properties.

1. The details of **property owner** are also stored. There are two main types of property owner **private owners** and **business owners**. The data stored for private owners includes **owner id, name, address, telephone number, email, and password**. The data stored on business owners includes **name of business, type of business, address, telephone number, email, password, and contact name.** The password will allow owners access to parts of the umbrella Corporation database using the web. Currently there are 12 private owners and 13 business owners that have **registered** with umbrella corporation company.
2. Umbrella Corporation refers to members of the public interested in renting property as clients. To become **a client**, a person must first **register** at a branch office of Umbrella Corporation. The data stored on Clients includes **client id, name, telephone number, email, preferred type of accommodation, and the maximum rent that the client is preferred to pay.** Also recorded is the details of the **employee** who processed the registration, the date the client joined, and some details on the branch office at which the client registered. The **client id is unique** across all Umbrella Corporation branches. Currently, there are 20 clients that have registered with Umbrella Corporation Company.

1. When a property is rented out, a **lease** is **drawn** up between the client and the property. That data listed in detail on the lease includes **lease number, client number, name and address, property number and address, monthly rent, method of payment** an indication of whether the deposit has been paid( calculated as twice the monthly rent), **duration of lease, and the start and end dates of the lease period.** Currently, there are 30 leases that have been recorded between Umbrella Corporation’s clients and its properties.