## Ooops Delivery Company

The Ooops Delivery Company introduces a new system supposed to increase the quality of services.

1. The company customers (described by unique id) are divided into corporate customers (REGON) and individuals (address, phone).
2. Corporate customers have local offices – for each local office we store its’ address and list of phone numbers.
3. Ooops divides its area of operations into regions. Each region has a name and description. The local offices and individual customers are assigned to areas – each individual customer belongs to exactly one area. One area may have multiple local offices ordered by creation date.
4. Company couriers (personal data, phone number) are assigned to areas. Each courier may be assigned to up to four areas, each area has to have at least one courier attached to it.
5. Couriers deliver parcels. Each parcel is described with unique id, delivery address its weight and declared delivery date.
6. The system has to store, which customer sent the parcel as well as (if the recipient is also a customer), who is the parcel’s recipient.
7. Parcels may be classified as Regular or Urgent. A Regular parcel becomes Urgent, if the declared delivery time is less than a certain amount of time away. The time is identical for all parcels and cannot be adjusted by more than 20% at one time. The moment, when a parcel is reclassified should be pre-calculated by the system when the parcel is classified as Regular and stored.
8. Every day each courier receives parcels to deliver and an electronic list of parcels. A parcel may be included in several such lists – e.g. one for pickup and several for delivery (if delivery is not successful for some reason, another attempt will be made) as well as a history of deliveries.
9. Each parcel has a unique number on such list.
10. The system should provide the following functionality:
    1. Accepting new parcel for delivery – including calculation of delivery costs. The delivery costs are calculated in a different way for Regular and Urgent parcels.
    2. Report about all overdue parcels
    3. Confirming pickup/delivery (the customer has to sign a digital form on a terminal the courier is equipped with). If the customer refuses to accept the delivery, the courier has to enter the reason for refusal