CS 353 Spring 2024
Homework 2
Due: February 22, Thursday till midnight
You will use the Moodle course page for submission of this assignment

Q.1 [70 points] Draw an **E/R** diagram for the conceptual design of a database system for an insurance company. The following information should be captured in your design (use draw.io or another diagramming tool):

- Insurance policies are identified by policy number, and start date and end date of a policy are also recorded. The insurance policies are issued by insurance companies and can be either type of life policies and vehicle policies. An insurance company is associated with a unique company id, name, phone number and address.
- Premium payments are associated with insurance policies. A payment number is partially unique within each policy. Due date and amount of each Premium payment are also stored.
- Life policies have coverage amount and policy type, and beneficiaries (a list of their TCK numbers) who will receive the benefits in case of the policyholder's demise.
- Vehicle policies have vehicle plate, vehicle type, and vehicle value.
- Policyholders are identified by TCK number, and their name and phone number are also recorded. A policyholder can be associated with a number of life policies, and/or vehicle policies.
- Vehicles are identified by their plates and categorized into cars, trucks and motorcycles. Color, production year, and model of the vehicles are also recorded in the database. Additionally, cars have car type and car style, trucks have truck type and weight, motorcycles have motorcycle type and size.
- Accidents are associated with policyholders and identified by a report id. The location, date and damage information of an accident are also recorded. There may be one or more vehicles involved in an accident, while a vehicle can be involved in zero or more accidents.

Q.2 [30 pts] Translate the **E/R** diagram of the previous question into the relational model (i.e., give the relation schemas for each case specifying the table names, together with the attributes, and primary key and foreign key constraints).