CSE3055 Database Systems

Project Step #2

Entities and their relations:

* **Employee**: Is a person that works for the company, may be a lawyer or a representative.
* **Representative**: Is a representative for the company on a trial assigned by either the government or the company itself.
* **Lawyer**: Is a lawyer working for the company in any form.
* **Bank**: is the bank account of a lawyer of the company to be paid
* **Payment**: Is the details for a payment record between the lawyer/s and the client.
* **Case**: Is a case that the company is responsible for and has specific lawyer/s and a client related to it.
* **Trial**: Is the record of a trial with related cases.
* **Client**: Is a client of the company of any form.
* **Person Client**: Is a person client of the company; is not a company in itself.
* **Company Client**: Is a client of the company that itself is a company.

Business Processes and Definitions:

Foremost the client makes a request for a case for the firm. The client might be a person or a company. The firm then assigns the case to one or more Lawyer employee types to be processed and looked after. A lawyer might or might not manage more lawyers. If the case goes to a trial the trial entity is created and holds it’s relevant information until the end of said trial. One or more cases might be related to a trial alongside court representative. The representative is either a representative entity or a lawyer entity. Once the service has been completed the Payment entity is used to keep the details of the formerly discussed payment. Transaction is a bank transaction performed by the client to fulfill the payment, might or might not be in installments. Payments are then processed and distributed to the related Lawyer entities.

Business Constraints:

* Employees must have a unique not null SSN number alongside all their other fields being not null.
* Representatives and Lawyers must have their corresponding numbers not null and unique.
* Every Lawyer must have a unique not null IBAN number to be associated with their banks.
* Each payment must have not null numbers for lawyers to be paid and the relevant customer that pays. All other fields must be not null.
* All Clients must have a not null customer number that is unique for identification.
* All Clients must have a phone number, might be more than one.
* All Clients **may** have one or more Email Addresses.
* Person clients must have their not null unique SSN numbers with not null name fields.
* Company clients must have a not null and unique company name and a not null address field. There might be more than one address.
* Cases must have a not null and unique case number, Alias and relevancy period may be left empty. Associated customers and lawyers must not be null and may be more than one. Case type must be not null.
* Trials must have a not null unique trial number. Alias and end date fields may be left null, all other fields must be not null and there may be multiple lawyers at court.

Requirements:

Functional:

* A log in system with SSN and Employee Number.
* An Employee can see their related cases and trials if there are any.
* An Employee’s information alongside their bank information can be changed.
* Managers can be assigned and un-assigned.
* All the cases’ and the trials’ information alongside payment, employee and customer information can be seen by an administrative account.
* Lawyers can mark trials as resolved if need be.

Non-Functional:

* Lawyers should be informed of the cases and trials assigned to them no longer than 10 minutes after the assignment.
* Lawyers should be informed of their payment situation and relevant details no longer than 30 minutes after the payment is processed.
* The administrative account should see all updates in the system within 2 minutes.

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