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Initial Requirements.

Manager – receive payments and commissions, view his own and others’ contracts and documents, track other translators, create, modify and delete contracts

Translator – receive payment and pay commission, track his own contracts, create, modify and delete contracts, report to the manager

Client – view the contract, send the payment, and provide feedback

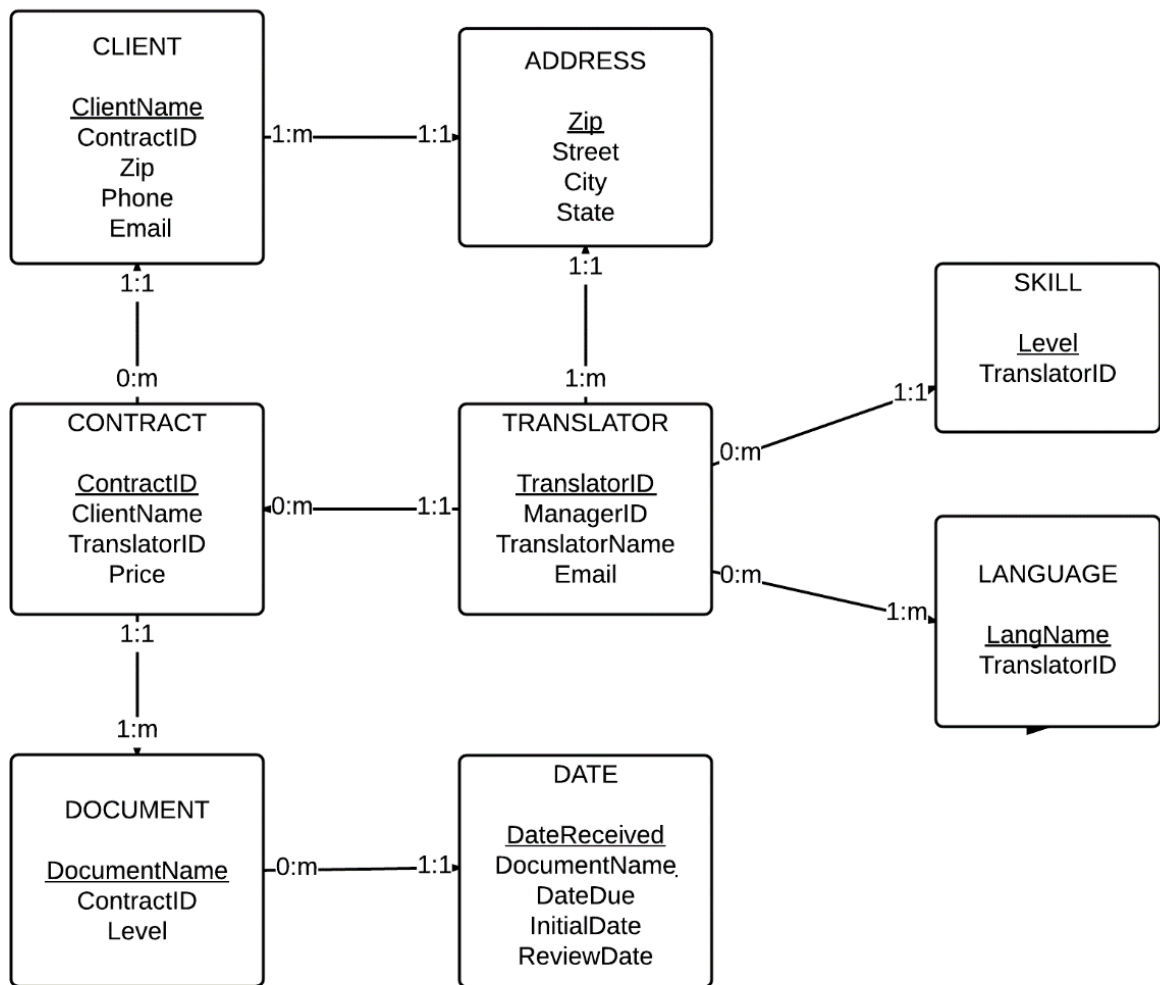
Analysis.

Task #	Task Description	Data that could be recorded
1	Receive payment, send payment	Client id, payment amount, contract id, date, translator id
2	View the contracts	Contract id, contract date, client name, contact, phone, address, e-mail, translator id, native language, target language, skill level, document name, date received, date due, initial date, review date, price, level of difficulty
3	Track other translators	Contract id, contract date, client name, translator id, document name, date received, date due, price, difficulty
4	Create, modify and delete contracts	Contract id, contract date, client name, contact, phone, address, e-mail, translator id, native language, target language, skill level, document name, date received, date due, initial date, review date, price
5	Report to the manager	Manager id, contract id, contract date, client name, translator id, date received, date due, price, difficulty

Reports:

1. A contract completion report will display a summary of the work done as well as both translator and client information, languages, starting and ending dates and price.
2. Monthly report will be basically used for statistics and will display how many contracts each translator has completed, what languages have been used, how much money has been earned with each contract.
3. Performance report will be used to track translators’ performances. It will display how many translators have completed difficult and easy jobs, if the work has been completed before the deadline.
4. Client reports will contain client information including where those clients come from, what languages they use and what document subjects are the most common.

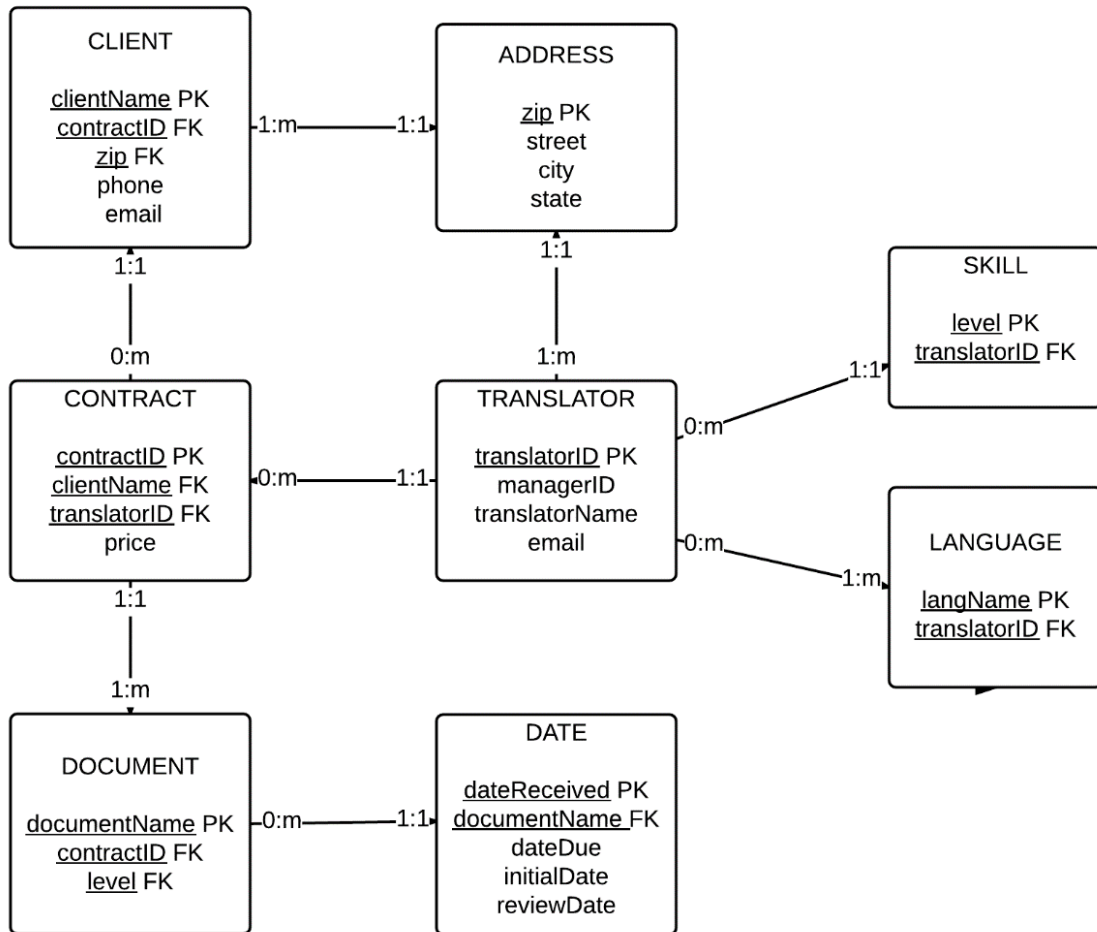
ER diagram:



- Client can have only address, and either 0 or many contracts.
- Contract can only have one translator working on it, either one or many documents for translator to work on, and only one and only client.
- Document can belong only to one contract, and have only one date.
- Any particular date can have 0 or many documents on it.
- Translator can work on 0 or many contracts, can have only one address, only one skill level and can know one or multiple languages.
- Address can belong to one or many clients, or to one or many translators.
- Skill level can belong to 0 or many translators.
- Language can be known to 0 or may translators as well.

Design.

ERD → relations:



Relations and verification:

CLIENT (ClientName PK, ContractID FK, Zip FK, phone, email)

CLIENT table has ClientName as the only one-column primary key, and contractID and zip as foreign keys. All attributes are single valued, and there is no transitive dependency.

ADDRESS (Zip PK, street, city, state)

ADDRESS table has zip as the only one-column primary key. All attributes are single valued, and there is no transitive dependency.

CONTRACT (ContractID PK, ClientName FK, TranslatorID FK, Price)

CONTRACT table has contractID as the only one-column primary key, and clientName and translatorID as foreign keys. All attributes are single valued, and there is no transitive dependency.

TRANSLATOR (TranslatorID PK, ManagerID, TranslatorName, Email)

TRANSLATOR table has translatorID as the only one-column primary key. All attributes are single valued, and there is no transitive dependency.

SKILL (Level PK, TranslatorID FK)

SKILL table has level as the only one-column primary key, and translatorID as foreign key. All attributes are single valued, and there is no transitive dependency.

LANGUAGE (LangName PK, TranslatorID FK)

LANGUAGE table has languageName as the only one-column primary key, and translatorID as foreign key. All attributes are single valued, and there is no transitive dependency.

DOCUMENT (DocumentName PK, ContractID FK, Level FK)

DOCUMENT table has documentName as the only one-column primary key, and contractID and level as foreign keys. All attributes are single valued, and there is no transitive dependency.

DATE (DateReceived PK, DocumentName FK, DateDue, InitialDate, ReviewDate)

DATE table has dateReceived as the only one-column primary key, and documentName as foreign key. All attributes are single valued, and there is no transitive dependency.