

COEN 280 - Project Magic Wand

Group members:

Tampara Venkata Santosh Anish Dora (W1641666)

Venkata Sai Srikar Jilla (W1652687)

Entity Relationship model:

The process of translating the [ER model](#) to a relational model is shown by designing a new diagram document that shows all the attributes in an entity with the constraints on each attribute.

The object-oriented approach was used to create relations of sub-classes.

Functional Dependencies-

1. Customer relation:
 - a. phone_number -> name, address
2. Service_Contract relation:
 - a. contract_id -> start_date, end_date, status, phone_number
3. Contract_deleted relation:
 - a. name, address, phone_number, date_of_cancellation
4. Repair_Job relation:
 - a. repair_id -> bill, itemised_bill, date_of_service, phone_number, machine_id, type_of_service
5. Service_item relation:
 - a. item_id -> device_type, year, make, model
6. Fee relation:
 - a. Device, rate, type_of_service
7. Monitor relation:
 - a. model, make, size, year

Constraints implemented:

1. In customer table
 - phone_number number not null primary key,
 - name varchar(30) not null,
 - address varchar(30) not null
2. In service_contract

contract_id number not null primary key,
start_date date not null,
end_date date not null,
status varchar(10) not null,
phone_number number not null,
Constraint FK_service_contract foreign key (phone_number) references
customer(phone_number)

3. In contract_deleted

name varchar(30) not null,
address varchar(30) not null,
phone_number number not null,
date_of_cancellation date not null

4. In repair_job

repair_id number not null primary key,
bill number not null,
itemised_bill varchar(100) not null,
date_of_service date not null,
phone_number number not null,
machine_id number not null,
type_of_service varchar(20) not null,
constraint FK_repair_job foreign key (phone_number) references
customer(phone_number),
constraint FK_repair_job1 foreign key (machine_id) references
service_item(item_id)

5. In service_item

item_id number not null primary key,
device_type varchar(15) not null,
"year" number not null,
make varchar(20) not null,
"model" varchar(20) not null

6. In Fee

device varchar(15) not null,
rate number not null,
type_of_service varchar(15) not null CHECK (type_of_service IN ('hardware',
'software', 'labour'))

7. In Monitor

"model" varchar(20) not null,
make varchar(20) not null,

"size" number not null,

"year" date not null

8. Machine ID= Contract ID= Item ID

Working of the project:

1. The user lands on the home page.
2. The user will be able to use any of the services provided
3. Data can be entered into a few tables by filling out the forms
4. Data can be retrieved as well.
5. Additional features have been implemented (Extra Credit)