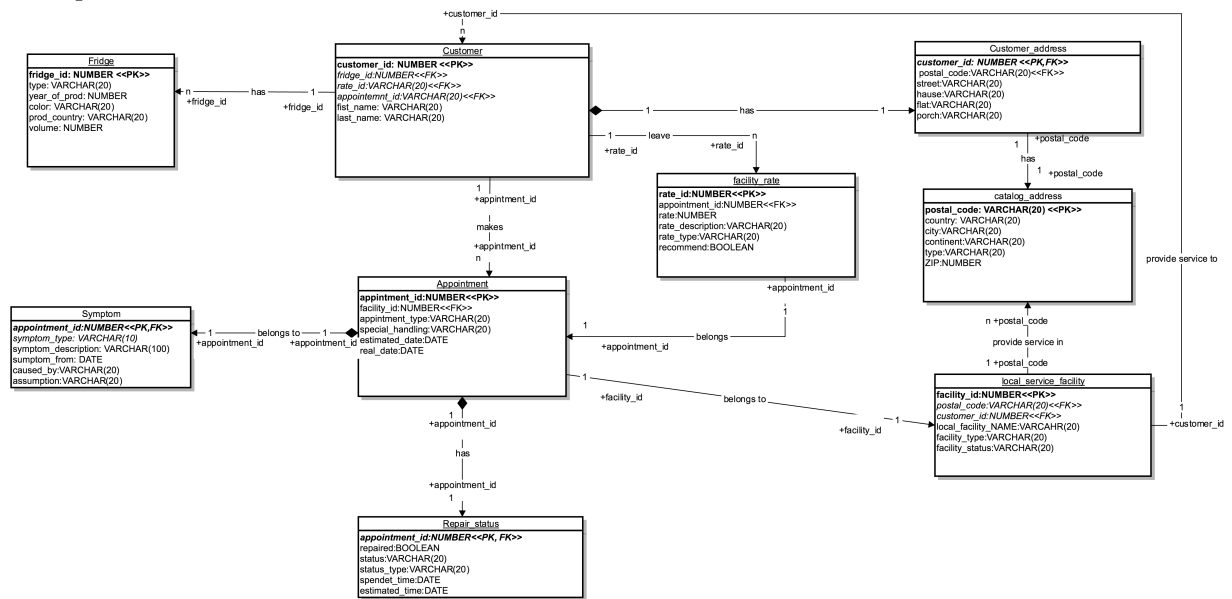Andrii Fedorenko a1349252

Chapter 1 "Model":

Chapter 2 "Entities":

- <u>Fridge</u> – strong entity. Means Fridge with additional attributes like color, type, volume etc.
    - o PK chosen by id of each fridge.
- Customer – strong entity. The person who own fridge(s), which has typical data like name and address which is references on table "Customer_address"
    - o PK chosen by auto generated id.
    - o FK fridge_id references on "Fridge"
    - o FK rate_id references on "Facility_rate" – means the Rate which customer left after appointment
    - o FK appointment_id – refererncess on specific "Appointment"
- Custommer_address – weak entity. 3rd normal form dividing of tables, removing dependency from "Customer"
    - o PK,FK customer_id defined by "Customer"
- Catalog_address – strong entity. 3rd normal form, removing from "Customer_address". Has typical attributes for address plus additional sometimes zip and postal code are different.
    - o PK chosen by postal code
- Local_service_facility – strong entity. Facility which provide repair service. Has attributes like Name, type and status if Facility still active.
    - o PK chosen by auto generated id
    - o FK postal_code - it means how many addresses specific facility can serve
    - o FK custome_id - means which customer they have my default.

- Appointment – strong entity. Specific appointment from Customer.
  - PK auto generated id
  - FK facility_id show which facility going to take this appointment.
- Symptom – weak entity. Means symptom of fridge, why it's broke and what's assumptions customer can give.
  - PK,FK appointment_id defined by "Appointment"
- Repair_status – weak entity. Means status of current appointment namely repair, if it's repaired than it's ok if not customer need new appointment.
  - PK,FK appointment_id defined by "Appointment"

Chapter 3 "Relations":

- <u>Fridge</u>
    - No relation from this entity
- Customer
  - FK fridge_id ONE TO MANY to "Fridge" ON fridge_id
    - *Customer has n Fridges*
  - FK rate_id ONE TO MANY to "facility_rate" ON rate_id
    - *Cusomer can leave facility rates*
  - FK appointment_id ONE TO MANY to "Appointment" ON appointment_id
    - *Customer can make n Appointments*
- Custommer_address
  - FK customer_id reference ONE TO ONE to "Customer" ON customer_id
    - *Customer has one address*
  - FK postal_code reference ONE TO ONE to "Adresses" postal_code
    - *Customer address has postal code*
- Catalog_address
    - No relation from this entity
- Local_service_facilities:
  - FK postal_code ONE TO MANY "Adresses"
    - *Local service facility provide service in n Addresses*
  - FK customer_id ONE TO MANY reference to "Customer"
    - *Local service facility provide service to n Customers*
- Appointment
  - FK facility ONE TO ONE "Local_service_facilities"
    - *One Appointment belongs to one local service facility*
- Symptom – weak entity
  - Defined by FK appointment_id from "Appointment" ONE TO ONE
    - *One symptom belongs to one appointment*
- Repair_status
  - Defined by FK appointment_id from "Appointment" ONE TO ONE

- Appointment has one repair status
  - Facility rate
    - FK appointment_id reference ONE TO ONE to Appointment ON appointment_id
      - *One facility rates belongs to one appointment*

Chapter 4 "Examples":

Table: Fridge

Fridge_id <<PK>>	Type	Year_of_prod	Color	Prod_country	Voulme
90823	BK	2015	RED	CHINA	20
23509	MK	2015	BLACK	CHINA	20
90234	TO	2014	BLUE	CHINA	40
32498	MK	2016	SILVER	CHINA	30
23980	MK	2017	BLACK	GERMANY	25

TABLE: CUSOMER

Customer_ID <<PK>>	Fridge_id <<FK>>	Rate_id <<FK>>	Appointment_id <<FK>>	First_name	Last_name
1	90823	10	100	Dick	Pickle
2	90823	20	200	Hans	Fill
3	90234	30	300	Banna	Man
4	32498	40	400	Bat	Man
5	23980	50	500	Fat	Man

TABLE: Customer_address

Customer_ID <<PK,FK>>	street	hause	Flat	Porch	Postal_code <<FK>>
1	ApplePie	123	41	Null	5432
2	Trambon	1	1	1	9999
3	Hell	66	666	66	6666
4	Haven	33	333	33	3333
5	Katchup	12	231	23	1111

TABLE: Addresses

Postal_code <<PK>>	Country	City	Continent	Type	ZIP
5432	United Kingdom	London	Antarctica	C	5432
9999	New Zealand	Nelson	Antarctica	C	9999
6666	France	Paris	Antarctica	W	6666

3333	Norway	Bergen	Antarctica	C	3333
1111	Chile	Santiago	Antarctica	W	1111

TABLE: Local_service_facilities

Facility_id <<PK>>	Postal_code <<FK>>	Cosumer_id <<FK>>	Local_facility_name	Facility_type	Facility _status
21	5432	1	FACILITY 1	General	ACTIVE
22	9999	2	FACILITY 2	General	ACTIVE
23	6666	3	FACILITY 3	General	ACTIVE
24	3333	4	FACILITY 4	General	ACTIVE
25	1111	5	FACILITY 5	General	ACTIVE

TABLE: Facility_rate

Rate_id <<PK>>	Appointment_id <<FK>>	Rate	Rate_description	Rate_type	reccoment
10	71	10	All good	Positive	TRUE
20	72	9	All good	Positive	TRUE
30	73	8	All good	Neutral	TRUE
40	74	9	All good	Positive	TRUE
50	75	9	All good	Positive	TRUE

TABLE: Appointment

Appointment_id <<PK>>	Facility_id <<FK>>	Appointment _type	Special _handling	Esimated _date	Real _date
71	21	Private	(Null)	2017-03-03 10:00	2017-03-03 10:00
72	22	Corporate	Take a key from door	2017-03-03 10:00	2017-03-03 10:00
73	23	Private	(Null)	2017-03-03 10:00	2017-03-03 10:00
74	24	Private	(Null)	2017-03-03 10:00	2017-03-03 10:00
75	25	Private	(Null)	2017-03-03 10:00	2017-03-03 10:00

TABLE: Symptom

Appointment _id <<PK,FK>>	Symptom _type	Symptom _description	Symptom_from	Caused_by	assumtion
71	NO SIGNAL	No signal when turn on	2017-01-01 10:01	(null)	(null)
72	DEMAGE	Scrateches on delievery	2017-01-01 10:01	DELIEVERY	Cargo issue
73	NO FRIDGE	No cold	2017-01-01 10:01	(null)	(null)
74	NO SIGNAL	No signal when turn on	2017-01-01 10:01	(null)	(null)
75	NO SIGNAL	No signal when turn on	2017-01-01 10:01	(null)	(null)

TABLE: Repair_status

Appointment _id <<PK,FK>>	Repaired	Status	Status_type	Spendet_time	Estimated_time
71	TRUE	Repaired and ready to use	REPAIRED	00:01:00	00:02:00
72	TRUE	Repaired and ready to use	REPAIRED	00:01:00	00:02:30
73	TRUE	Repaired and ready to use	REPAIRED	00:01:00	00:01:00
74	TRUE	Repaired and ready to use	REPAIRED	00:01:00	00:01:30
75	TRUE	Repaired and ready to use	REPAIRED	00:01:00	00:02:00