2) Design your own relational database

Person (Data-table)

CPR	Name	Sex	Birthday	Date of death
100	Christian	M	1997-04-07	N/A
101	Frederik	M	2008-01-01	N/A
102	Signe	F	1997-01-02	N/A
103	Caroline	F	1997-02-03	N/A
104	Anna	F	1997-02-25	N/A
105	Aleksander	M	1997-02-03	N/A

Parents (Relational-table)

Child CPR	Parent 1 CPR	Parent 2 CPR
101	100	104
105	102	102

Marriage (Relational-table)

Person 1 CPR	Person 2 CPR	Date start	Date end
100	104	2022-08-28	N/A
101	103	2024-07-29	N/A

Disease (Relational-table)

Case ID	CPR	Disease	Date start	Date End
001	101	Flu	2022-08-28	2022-09-01
002	104	Covid	2022-08-27	N/A
003	100	Covid	2022-08-26	N/A

2) Change the database model

Person (Data-table)

CPR	Name	Sex	Birthday	Date of death
100	Christian	M	1997-04-07	N/A
101	Frederik	M	2008-01-01	N/A
102	Signe	F	1997-01-02	N/A
103	Caroline	F	1997-02-03	N/A
104	Anna	F	1997-02-25	N/A
105	Aleksander	M	1997-02-03	N/A

Parents (Relational-table)

Child CPR	Parent 1 CPR	Parent 2 CPR
101	100	104
105	102	102

Marriage (Relational-table)

Person 1 CPR	Marriage ID
100	001
101	001
104	001

Marriage DB (Relational-table)

Marriage ID	Date start	Date end
001	2022-08-28	N/A

Disease (Relational-table)

Case ID	CPR	Disease	Date start	Date End
001	101	Flu	2022-08-28	2022-09-01
002	104	Covid	2022-08-27	N/A
003	100	Covid	2022-08-26	N/A

I put the following constraints on the database:

1. For a marriage ID to be valid, all CPR numbers of the participants in the marriage need to be alive. Otherwise, the marriage ID will get an end date, and a new marriage ID will be generated for the remaining participants. This way, we can track previous "multi-person" marriages.
2. In the parents database, only two people can be parents/guardians of a child.
3. Case IDs in the Disease Database can only be active if the CPR number holder is alive. If not, the case ID will get an end date. This way, we can track diseases in the population and also test for correlations between death and and any given disease