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Databse Systems
HW7

16/20

ORTHODONTIC_VISITS

Doc#	DocName	Office#	TreatmentGiven	OAddress	PName	PAddress	TCost	Treatment#	Patient#	ApptDate	ApptTime	DocDeg

LaborCosts SupplyCosts

FD1
FD2
FD3
FD4
FD5

OFFICE

FD1 | Office# | OAddress | Doc# |

PATIENT

FD2 | Patient# | PName | PAddress |

DOCTOR

FD3 | Doc# | DocName | DocDeg |

TREATMENT

FD4 | Treatment# | TreatmentGiven | LaborCosts | SupplyCosts | Patient# |
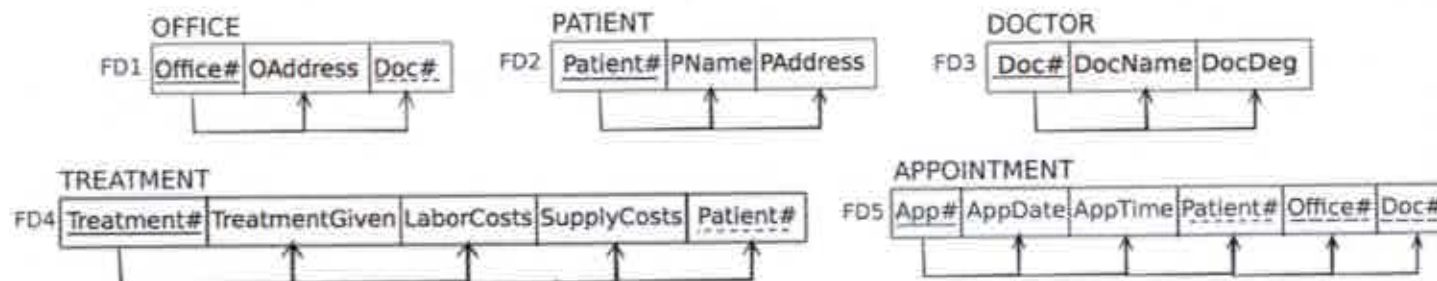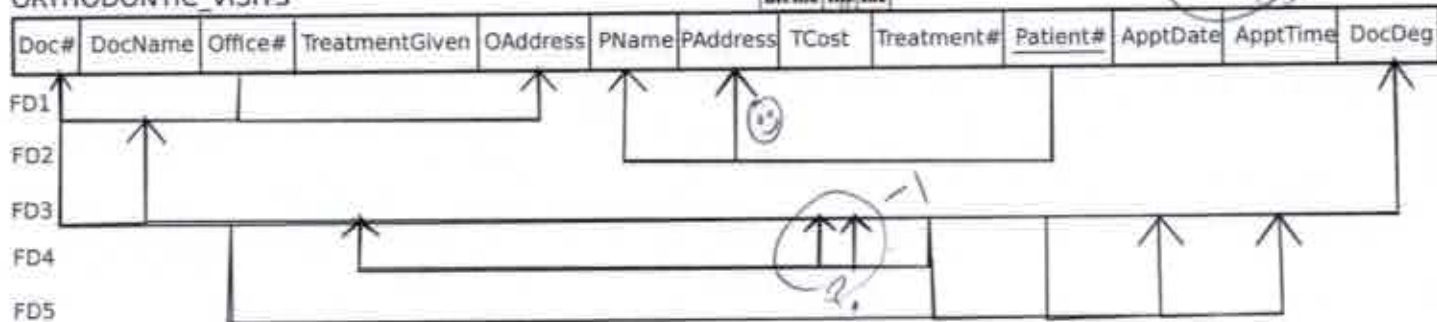
APPOINTMENT

FD5 | App# | AppDate | AppTime | Patient# | Office# | Doc# |

1. The form was not in 1NF form because TCost is a composite attribute and 1NF does not allow for this. To fix the problem I took the TCost and divided it into LaborCosts and SupplyCosts.

2. The form was not in 2NF because FD5 did not have a primary key. I made a new primary key called App#, which allows the other attributes to be dependant on App#. — NO

3. The form was not in 3NF because Visit contains data the describes data in another table(TreatmentGiven, TCosts). I fixed this problem by getting rid of Visit and dividing them between the tables TREATMENT and APPOINTMENT. Now the other attributes in these tables depend wholey on the primary key. I had to add a foreign key Patient# to TREARMENT to be able to relate or join the information together when querying data.

4. Patient# would be the primary key for ORTHODONTIC_VISITS because without a Patient their would be no visiting of an Orthodontist. The patient is the the primary concern.

Assumptions
1. I assumed that APPOINTMENT should include App# key for a scheduled appointment tracking.
2. I assumed that Patient# is needed in TREATMENT for relating TREATMENT table with other tables.

1NF, 2NF -3
Did not show 2NF -3