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Lab 9: Normalization Three

Functional Dependencies:

People:

- PID → fname, lname, dob

Engineers

- PID → degreeEarned, favVideoGame,

Astronauts

- PID → yrsFlying, golfHandicap, spouse_fname, spouse_lname

FlightControlOps

- PID → chairPref, drinkPref, hangCure

Crew

- SID, PID →

Spacecraft

- SID → name, tailNum, weight_Tons, fuelType, crewCap

CraftSys

- SID, SYID →

Systems

- SYID → name, desc, costUSD

SysParts

- SYID, PTID →

Parts

- PTID → name, desc, costUSD

Catalog

- SUPID, PTID →

Suppliers

- SUPID → name, address, city, state, zip, paymentTerms

Rationalization of Normalization

First, this database is 1NF because all attributes contained in its tables are atomic. It is 2NF because it is 1NF and all non-key attributes are dependent on the primary key of their respective tables. Additionally it is 3NF because it is 2NF and all attributes are only dependent on the primary key (no partial key dependencies).