1. IDENTIFY ALL FUNCTIONAL DEPENDENCIES

People: PID → first_name, last_name, age

FlightControlOperators: PID → preferred_drink, preferred_chair, hangover_cure

Astronauts: PID → years_flying, golf_handicap, spouse_name

Engineers: PID →degree_earned, favorite_videogame

Crew: PID, SCID →

Spacecrafts: SCID → name, tailnumber, weight_tons, fuel_type, crew_capacity

SpacecraftSystems: SCID, SYID →

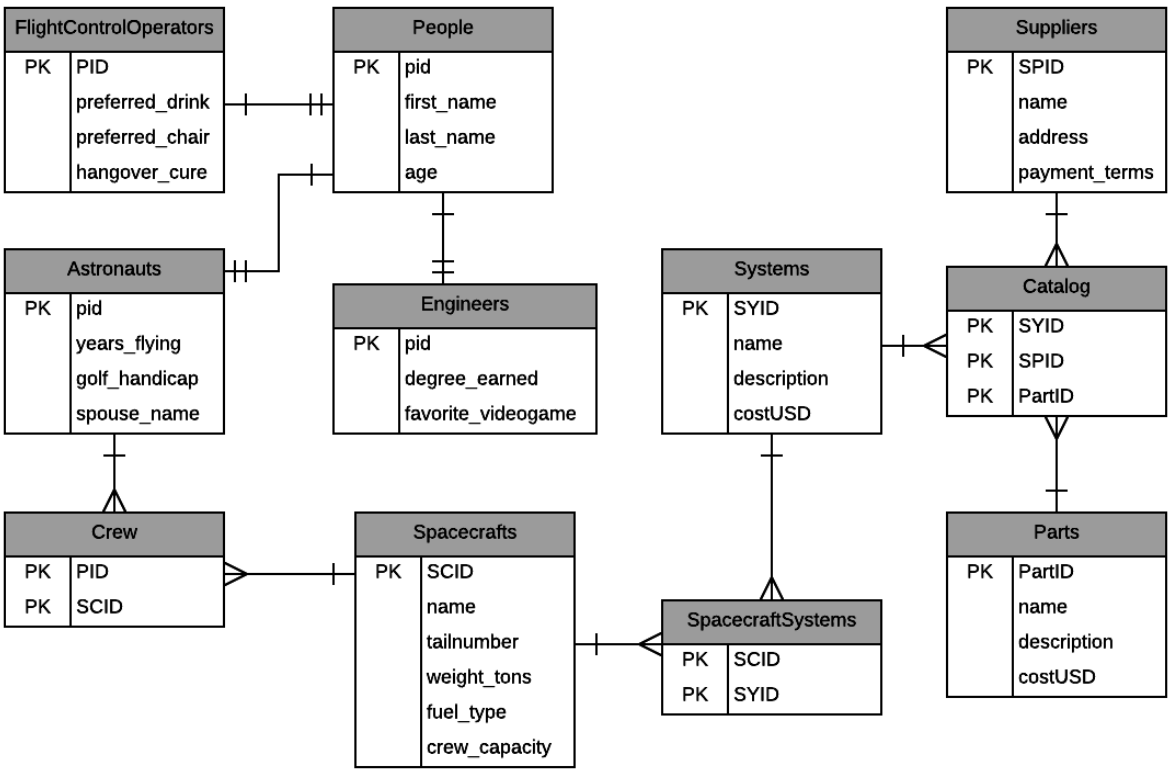
Systems: SYID → name, description, costUSD

Suppliers: SPID → name, address, payment_terms

Parts: PartID → name, description, costUSD

Catalog: SYID, SPID, PartID

2. DRAW A BEAUTIFUL AND CORRECT RELATIONAL DATABASE E/R DIAGRRAM



3. WHY IT IS IN 3NF

This database design in in 3NF because it does not have any transitive or multi-key dependencies, also because the database design is in first and second normal form, thus resulting in a third normal form database design. This database is also in Boyce-Codd normal form because even though there are weak entities, it lacks attributes that would be functionally determined by the key's, therefore resulting in a clean database that is not only 3NF, but also Boyce-Codd normal form.