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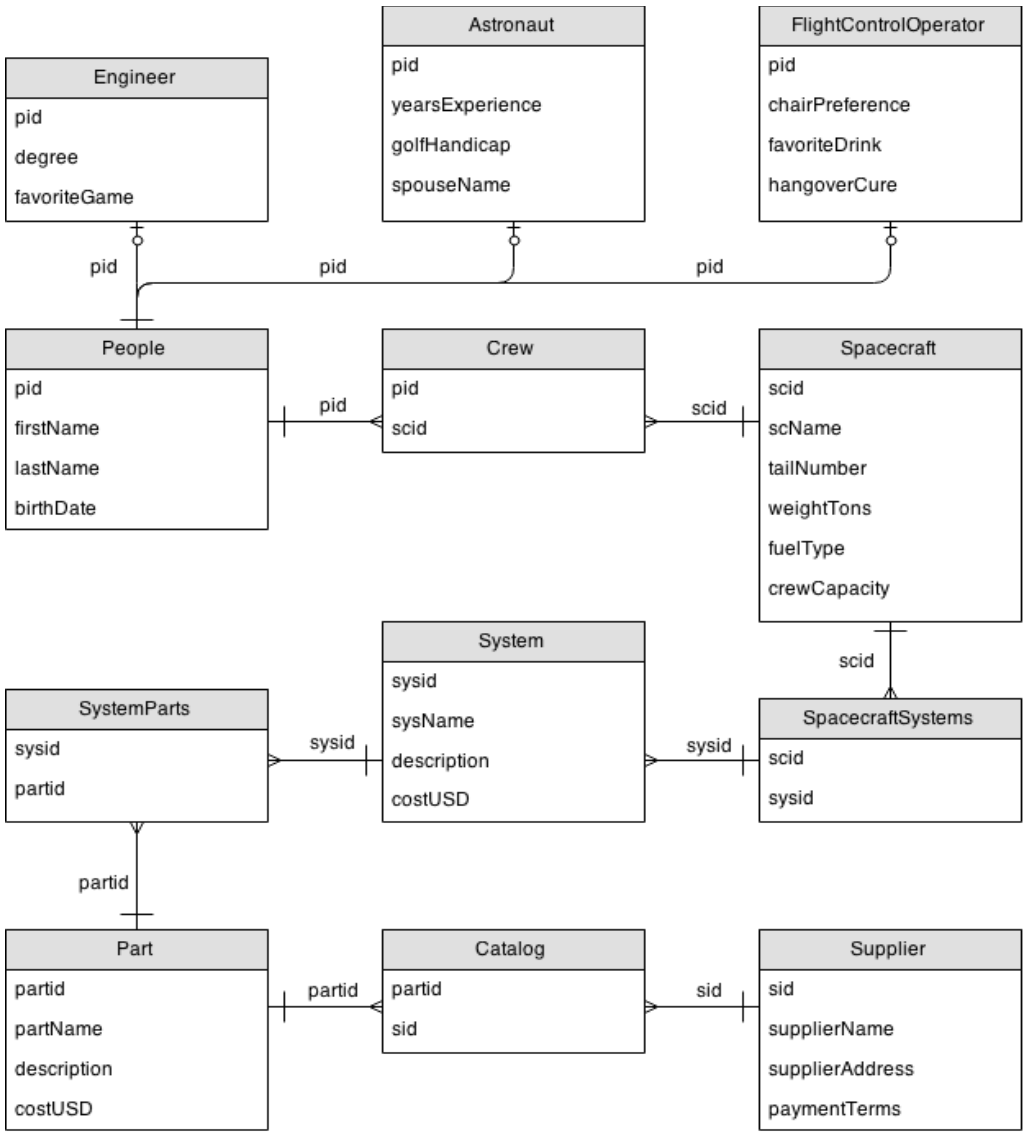
Databases Lab 9: Normalization Three

1.
```
Engineer: pid -> degree, favoriteGame
Astronaut: pid -> yearsExperience, golfHandicap, spouseName
FlightControlOperator: pid -> chairPreference, favoriteDrink, hangoverCure
People: pid -> firstName, lastName, birthDate
Crew: None
Spacecraft: scid -> scName, tailNumber, weightTons, fuelType, crewCapacity
SpacecraftSystems: None
System: sysid -> sysName, description, costUSD
SystemParts: None
Part: partid -> partName, description, costUSD
Catalog: None
Supplier: sid -> supplierName, supplierAddress, paymentTerms
```

2.



3. This database is in 3NF because every non-prime attribute is determined by the candidate key of each respective table. For Engineer, Astronaut, Flight Control Operator and People (of which the first three share an identifier as the last), the primary key is pid. The others are scid (Spacecraft), sysid (System), partid (Part), and sid (Supplier). This database should also be in BCNF because every dependency is either a trivial functional dependency (such as pid -> degree or sid -> paymentTerms), or a super key (pid, scid, partid, etc.).