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Normalization 3 – lab 9

1. All functional dependencies are:
   People- PID→ firstName, LastName, age
   Engineers- PID→ highestAcademicDegree, favoriteVideoGame
   Astronauts- PID → yearsFlying, golfHandicap, spouse
   Flight Control Operators- PID → chairPreference, preferredDrink, hangoverCure
   Crew- PID, Spacecraft_ID
   Spacecraft- Spacecraft_ID → tailNumber, weight, fuelType, crewCapacity
   System/Spacecraft- Systems_ID, Spacecraft_ID
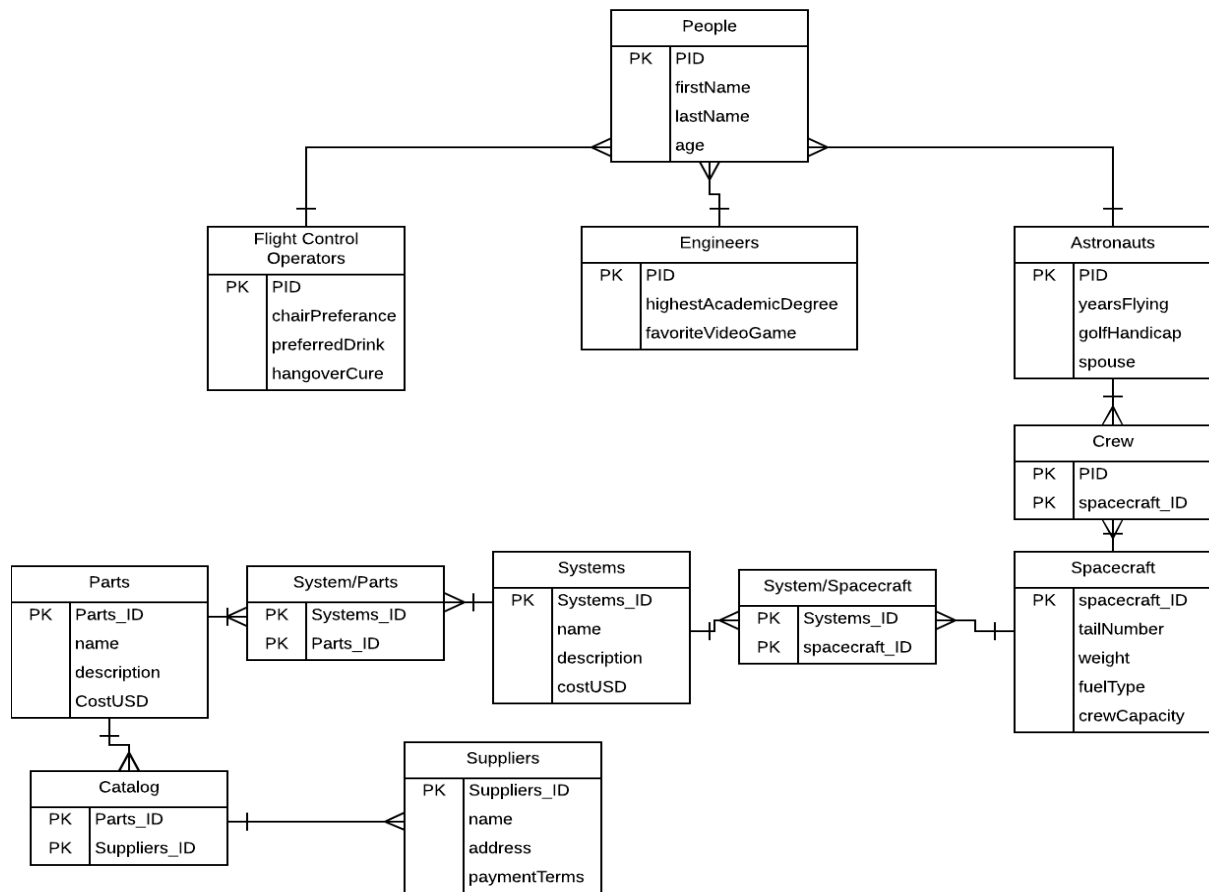   Systems- Systems_ID → name, description, costUSD
   Systems/parts- systems_ID, parts_ID
   Parts- Parts_ID→ name, description, costUSD
   Catalogue- parts_ID, suppliers_ID
   Suppliers- Suppliers_ID→ name, address, paymentTerm

2.

People
PK	PID
	firstName
	lastName
	age

Flight Control Operators
PK	PID
	chairPreferance
	preferredDrink
	hangoverCure

Engineers
PK	PID
	highestAcademicDegree
	favoriteVideoGame

Astronauts
PK	PID
	yearsFlying
	golfHandicap
	spouse

Crew
PK	PID
PK	spacecraft_ID

Spacecraft
PK	spacecraft_ID
	tailNumber
	weight
	fuelType
	crewCapacity

Parts
PK	Parts_ID
	name
	description
	CostUSD

System/Parts
PK	Systems_ID
PK	Parts_ID

Systems
PK	Systems_ID
	name
	description
	costUSD

System/Spacecraft
PK	Systems_ID
PK	spacecraft_ID

Catalog
PK	Parts_ID
PK	Suppliers_ID

Suppliers
PK	Suppliers_ID
	name
	address
	paymentTerms

3.

The following database is in third normal form because it needs second normal form. It is in second normal form because all the non attributes are dependent on the primary keys. Therefore, the requirement is made and there is no transitive dependences. The table can be considered to be in boyce codd normal form because the determinant is a candidate key in which its divided into tables.