Megan Makini
Dr. Alan Labouseur
Database Management
17 November 2016
<p style="text-align:center">Lab 9: Normalization Three</p>

1. Functional Dependencies:
   PID → FirstName, LastName, Age, SpouseName
   PID → HighestAcademicDegree, FavoriteVideoGame
   PID → YearsFlying, GolfHandicap
   PID → ChairPreference, DrinkPreference, RecommendedHangoverCure
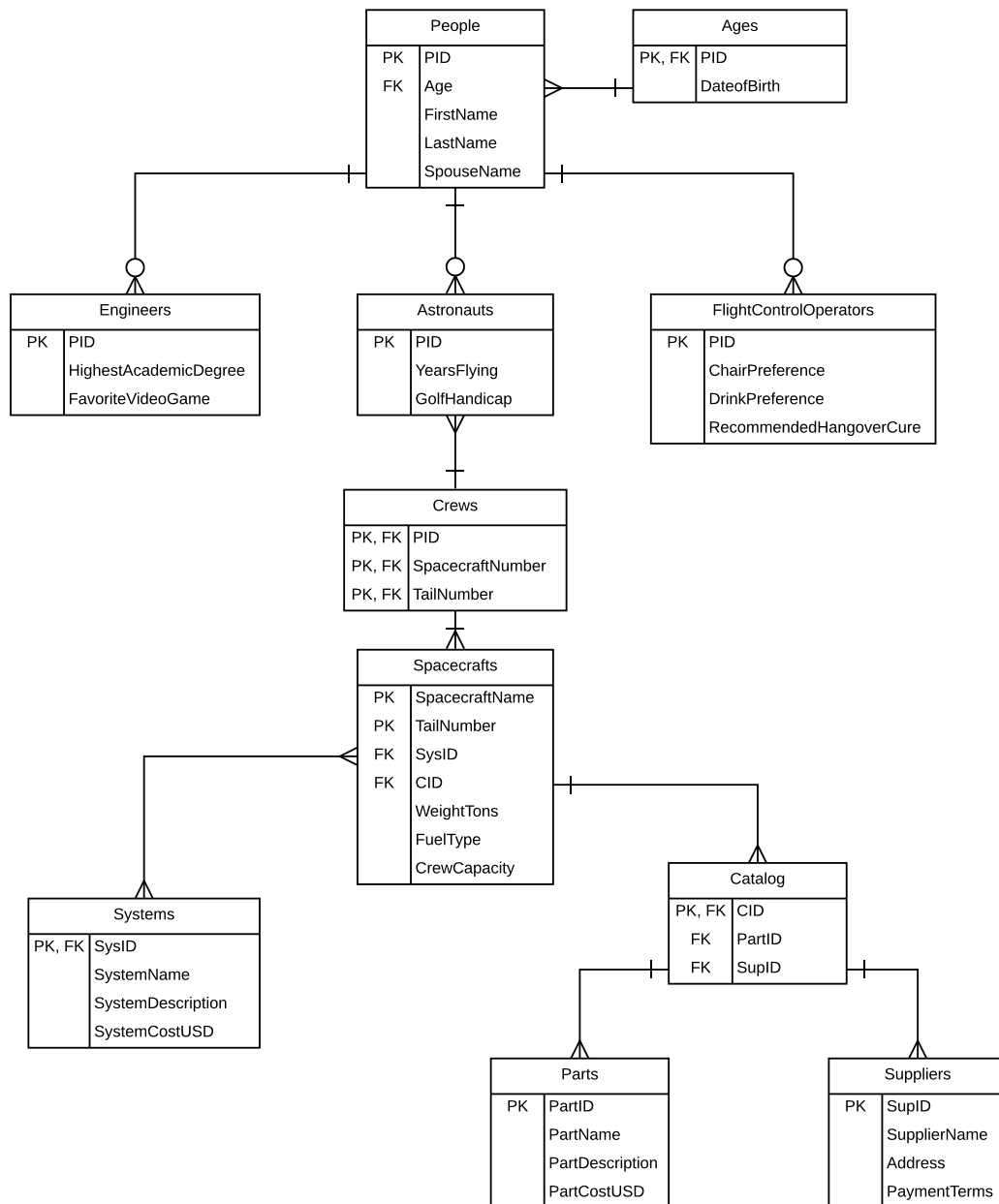   SpacecraftName, TailNumber → SysID, CID, WeightTons, FuelType, CrewCapacity
   SysID → System Name, SystemDescription, SystemCostUSD
   CID → PartID, SupID
   PartID → PartName, PartDescription, PartCostUSD
   SupID → SupplierName, Address, PaymentTerms

2. E/R Diagram

People

PK	PID
FK	Age
	FirstName
	LastName
	SpouseName

Ages

PK, FK	PID
	DateofBirth

Engineers

PK	PID
	HighestAcademicDegree
	FavoriteVideoGame

Astronauts

PK	PID
	YearsFlying
	GolfHandicap

FlightControlOperators

PK	PID
	ChairPreference
	DrinkPreference
	RecommendedHangoverCure

Crews

PK, FK	PID
PK, FK	SpacecraftNumber
PK, FK	TailNumber

Spacecrafts

PK	SpacecraftName
PK	TailNumber
FK	SysID
FK	CID
	WeightTons
	FuelType
	CrewCapacity

Systems

PK, FK	SysID
	SystemName
	SystemDescription
	SystemCostUSD

Catalog

PK, FK	CID
FK	PartID
FK	SupID

Parts

PK	PartID
	PartName
	PartDescription
	PartCostUSD

Suppliers

PK	SupID
	SupplierName
	Address
	PaymentTerms

3. Convince me that your database is in 3NF

The database contains only atomic fields that have no internal structure, no partial dependencies, or multiple dependencies. Meeting the three criteria listed before, the database meets 1NF, 2NF, and ultimately 3NF.