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Lab 9 – Spring 2015

NASA's PEOPLE CHART:

This is 2NF because there are no partial dependencies in any of the tables. Technically, the Employees table is a weak entity because of its use of a foreign key for zip code, however we will still use this model because the zip would cause a partial dependency for city and state. Thus breaking 2NF. FC Operators, Engineers, and Astronauts are all entity subtypes. The tables are in 3NF because they are in 2NF and there are no transitive dependencies.

Zip Codes FD: zip -> city, state

Employee FD: EID -> fname, lname, street addr, zip[FK], age

FC Operators: EID[FK] -> chair, drink, cure

Engineers: EID[FK] -> degree, game

Astronauts: EID[FK] -> years flying, golf, spouse name

NASA's PLANT CHART:

Suppliers FD: SID -> name, addr, zip[FK], payTerm

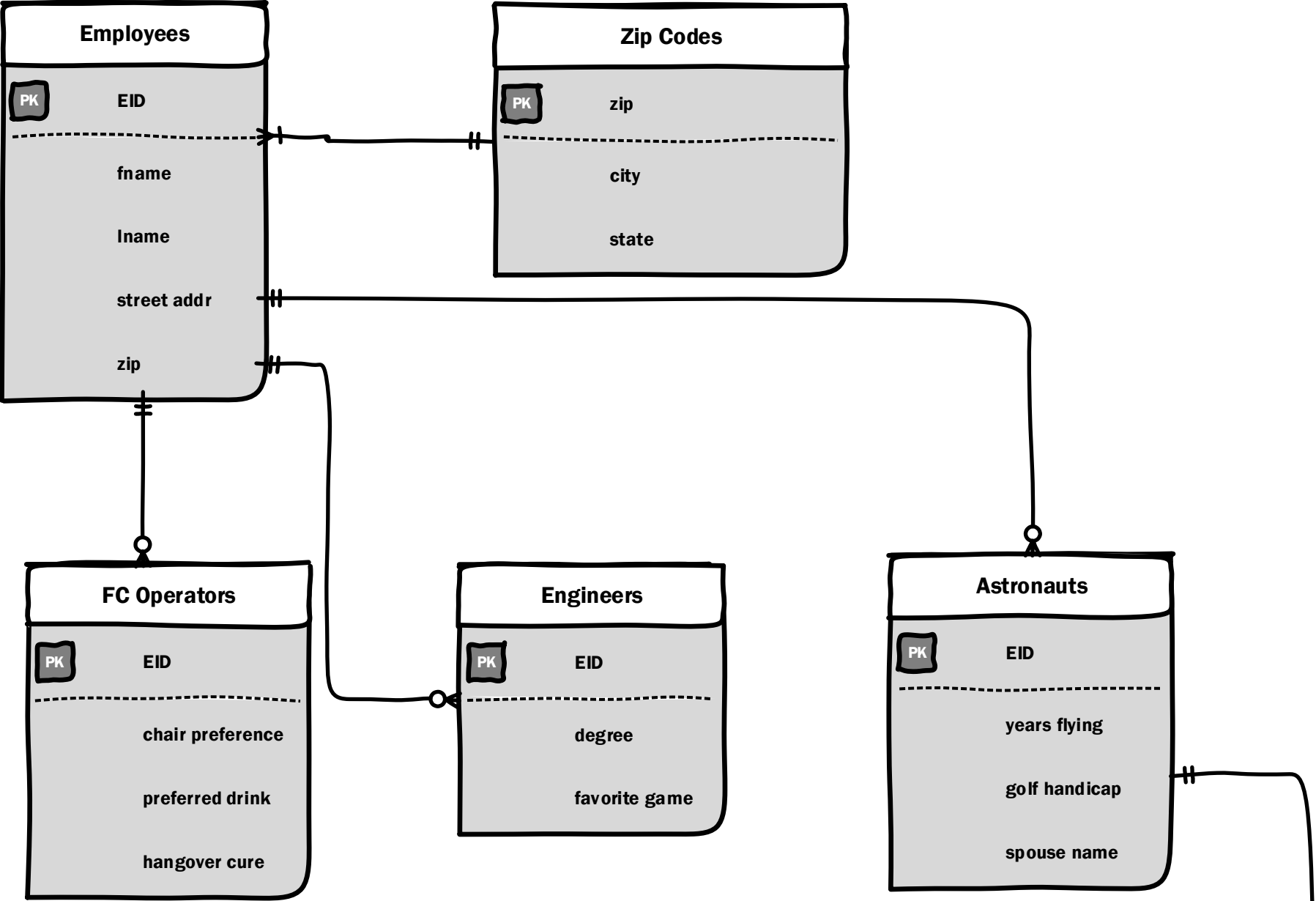**Parts** FD: PN -> sname[FK], desc, costUSD

Catalog FD: SID[PK], PN[PK]

System FD: sname[PK], tailNum[PK] -> desc, costUSD

SpaceCraft FD: tailNum[PK] -> name, weightT, fuel, capacity

Crew FD: tailnum[FK], EID[FK]

NASA's PEOPLE CHART

Employees

PK	EID
	fname
	lname
	street addr
	zip

Zip Codes

PK	zip
	city
	state

FC Operators

PK	EID
	chair preference
	preferred drink
	hangover cure

Engineers

PK	EID
	degree
	favorite game

Astronauts

PK	EID
	years flying
	golf handicap
	spouse name

NASA's PLANT CHART

Suppliers

PK	SID
	name
	addr
	zip
	payTerm

Parts

PK	PN
	sname
	desc
	costUSD

SpaceCraft

PK	tailNum
	name
	weightT
	fuel
	capacity

Catalog

PK	SID
PK	PN

System

PK	sname
PK	tailNum
	desc
	costUSD

Crew

PK	TailNum
PK	EID