CSC1-314 Data Management Systems
Boyce-Codd Normal Form Homework

Due Monday morning at 9:30. 10 points possible

1. Consider the following table that is populated with some sample data.

BoatName	Make	Model	Length	OwnerLastName	OwnerFirstName	OwnerPhone	Address	City	State	ZIP
Far Horizon	Catalina	Morgan	38	Princeton	Darryl	206-543-6677	2345 15th NE	Seattle	WA	98115
Ebb Tide	Hunter	38	38	Tulsa	Bill	503-486-8786	1324 24th NE	Portland	OR	97215
Foreign Shores	Hans Christian	38 MK II	38	Berkely	George	425-765-4455	4567 35th W	Bellevue	WA	98040
Seafarer V	Endeavour	37	37	Tulsa	Bill	503-486-8786	1324 24th NE	Portland	OR	97215
Midnight on the Water	Sabre	32	32	Oxford	Kelly	503-578-7574	2435 36th SE	Astoria	OR	97103

a. In what way is this table susceptible to modification anomalies?

b. The table is not in BCNF. Justify this statement.

c. Decompose the table so that all your resultant relations will be in BCNF. Justify.

d. Produce a relational algebra query on your new relations that will produce a list of all boat names that are over 35 feet in length.