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CSC6302

Project One: Getting Started with Database Design

1.) Database Design:

a.) FamilyMember(FamilyMemberName varchar(20), age int, DestinationName varchar(30))

a. Super Keys: {FamilyMemberName, age, DestinationName}, {age, DestinationName}, {FamilyMemberName, age}, {FamilyMemberName, DestinationName}, {FamilyMemberName}, {age}, {DestinationName}
b. Candidate Keys: {FamilyMemberName}, {FamilyMemberName, age}, {FamilyMemberName, DestinationName}
c. Primary Key: {FamilyMemberName, age} I went with this one just in case that two members in the family have the same name; father and son for example. After designing this database, I realized that it's probably a good idea to give IDs to every database table. I didn't at first because it didn't make sense to give family members an ID, but it just seems like it is the smartest move.

b.) Destination(DestinationName varchar(30), activities varchar(30), destination_price numeric(5,2))

a. Super Keys: {DestinationName, activities, destination_price}, {activities, destination_price}, {DestinationName, activities}, {DestinationName, destination_price}, {DestinationName}, {activities}, {destination_price}
b. Candidate Keys: {DestinationName}, {DestinationName, activities}, {DestinationName, destination_price}
c. Primary Key: {DestinationName} I picked this because every destination would have a different name, so it is easy to use. However, as I mentioned earlier it would be a good idea to use IDs.

c.) Costume(CostumeName varchar(30), FamilyMemberName varchar(20), costume_price numeric(3,2))

a. Super Keys: {CostumeName, FamilyMemberName, costume_price}, {FamilyMemberName, costume_price}, {CostumeName, FamilyMemberName}, {CostumeName, costume_price}, {CostumeName}, {FamilyMemberName}, {costume_price}
b. Candidate Keys: {CostumeName}, {CostumeName, FamilyMemberName}, {CostumeName, costume_price}, {CostumeName, FamilyMemberName, costume_price}
c. Primary Key: {CostumeName, FamilyMemberName, costume_price} I know that this is very inefficient/impractical since we are using every column of the

relationship, but since there are only 3 it works here. I can't use just the CostumeName since two family members could wear a matching one. I can't use only the CostumeName and FamilyMemberName because as I mentioned earlier, let's say a father and son for example with matching names want to wear matching costumes. Including the price will be unique since adult and children's sizes will cost different amounts. This is an extreme case, but just further tells me I need to include IDs in future tables.