

Lab 9 – Normalization Three

Functional Dependencies

People table:

$\text{personID} \rightarrow \text{firstName}, \text{lastName}, \text{address}, \text{levelID}, \text{phoneNumber}$

CeresLevels table:

$\text{levelID} \rightarrow \text{levelName}$

Players table:

$\text{playerID} \rightarrow \text{teamID}, \text{age}$

Coaches table:

$\text{coachID} \rightarrow \text{coachingStartYear}$

HeadCoaches table:

$\text{headCoachID} \rightarrow$

AssistantCoaches table:

$\text{asstCoachID} \rightarrow$

TeamAsstCoaches table:

$(\text{asstCoachID}, \text{teamID}) \rightarrow$

Teams table:

$\text{teamID} \rightarrow \text{headCoachID}, \text{teamName}, \text{ageGroup}$

Normalization Status

This database design is in Boyce-Codd normal form, because all the values are atomic, it obeys all three relational rules (1st normal form), and there are no partial key dependencies (2nd normal form), no multiple-key dependencies (3rd normal form), and no transitive interior dependencies.

Entity Relationship Diagram

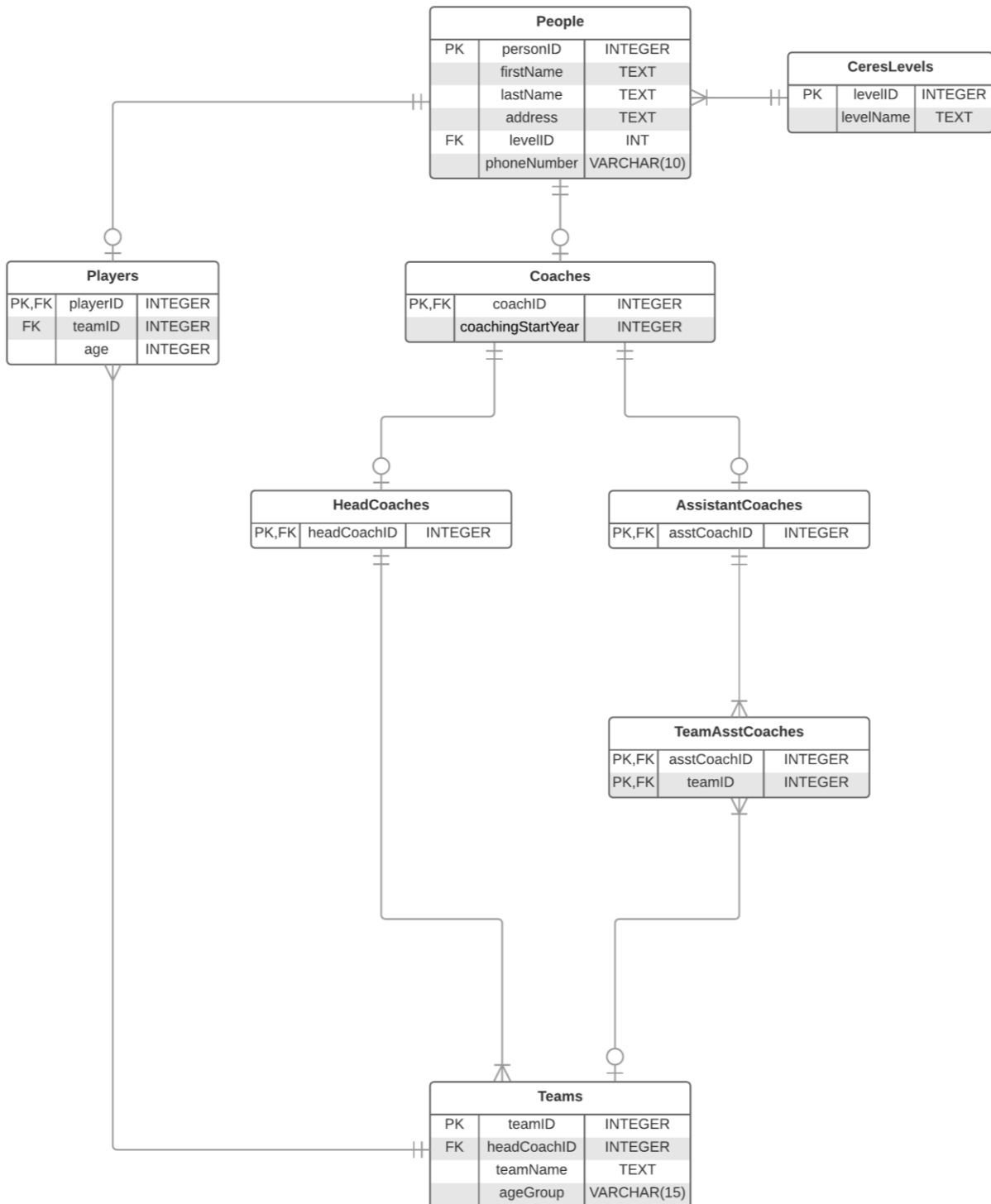


Figure 1 - E/R diagram for Belters Little League Sports Alliance