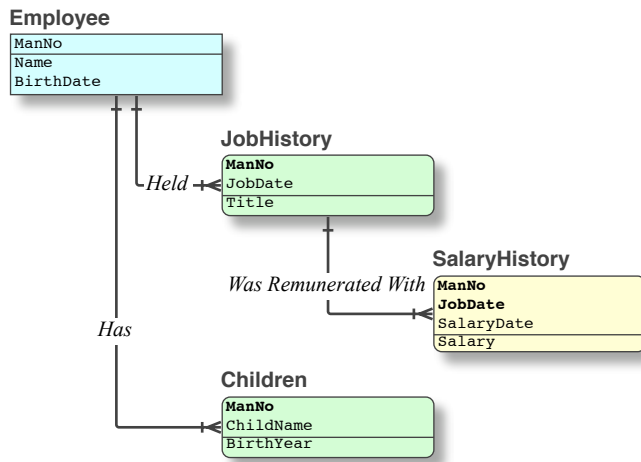
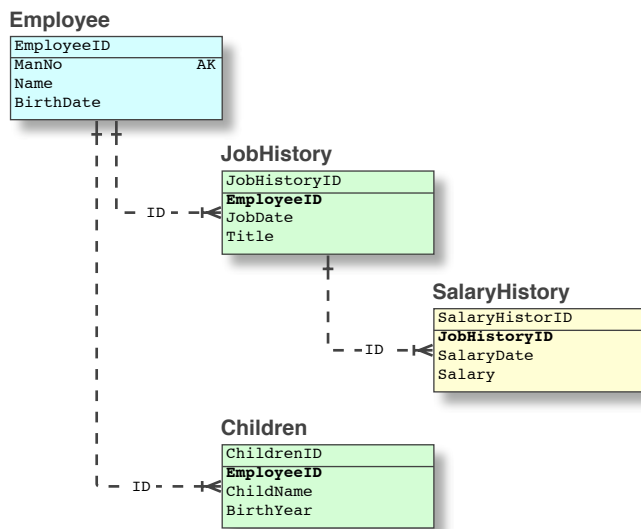


1.4. Normal Form Fig 3(b) Normalised Set (Relational Model)



- The tables and relations are that given by Codd in the text
 - Any other structure (eg. Independent tables or Non-identifying relations) is a failure to understand his words.
 - Further, such tables will have substantially less Relational Integrity, Power, and Speed.
- This has no **Access Path Dependence**
 - Each table can be accessed individually, by its own Key (or part thereof), joined as required, etc
- This has maximal **Data Independence** (wrt these elements)

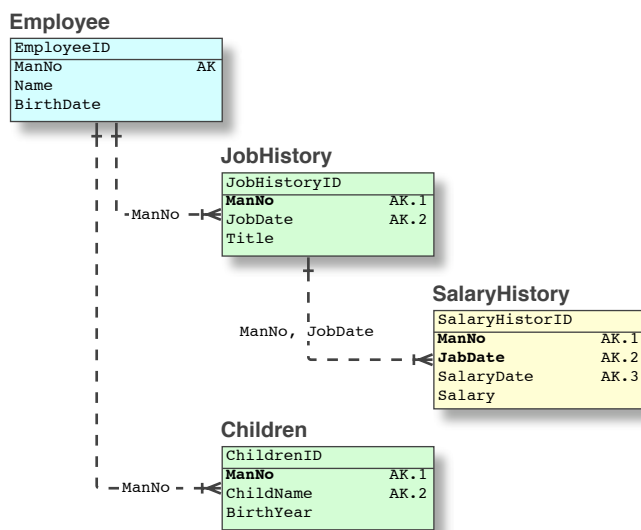
Record Filing System 1



The typical Record Filing System that people implement in an SQL database container for convenience (DML access; backups)

- Each table is in fact, a File, with a surrogate Record ID
- The references are Record IDs, same as ISAM
- There are no Keys (made up from the data, as **demanded**)
- The **demanded** row uniqueness is absent
- There is no **Integrity**.
- This has the prohibited **Access Path Dependence**
- This has no **Data Independence**

Record Filing System 5



The typical Record Filing System, after some of the issues have been identified and corrected, through a number of iterations (not shown).

- The maximal RFS.
- It now approaches the *Relational Model*, but remains a cumbersome RFS with twice as many indices, etc