

5.2 Identification Scheme

In simple systems a single identifier for each object is typical, but more complex systems have many identifiers for one object. The health care industry has many schemes for identifying patients: Each hospital assigns a case number, and departments have individual numbers. Banking uses several schemes to identify banks: SWIFT, sort codes, CHAPS, and so on. This more general approach can be supported by a model along the lines of Figure 5.4.

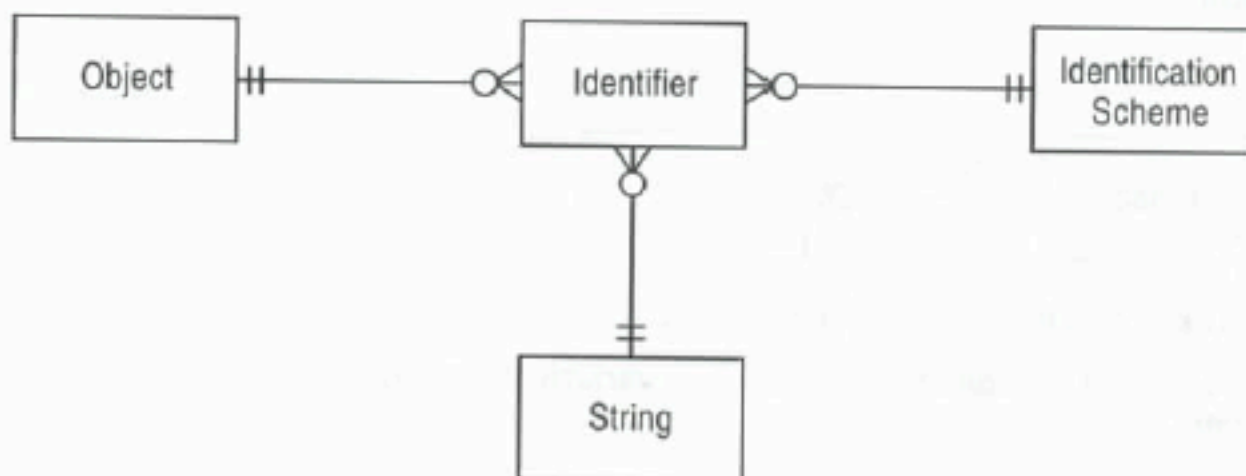


Figure 5.4 Identification schemes.

Example The World Health Organization's International Classification of Diseases uses the code E10 for type I diabetes. This can be represented as an identifier with string 'E10,' identification scheme ICD-10, and object the disease diabetes mellitus type I.

Example Suppose I have a passport number of 123456. This is represented as an identifier with string '123456,' identification scheme UK passport, and object myself. Depending on the situation, however, the object could be my passport.

Identification schemes represent the context used to identify an object. A single account will have separate SWIFT and CHAPS numbers. The same character sequence can indicate two different banks in SWIFT and CHAPS, but this is not a problem if these strings are in different schemes.

The model in Figure 5.4, although a start, is not the whole story. Its crude form includes nothing to stop one string from being used to represent more than one object within the same scheme. A useful concept here is the uniqueness constraint [1], which is used to indicate that a particular combination of mappings must have unique values for an object type.