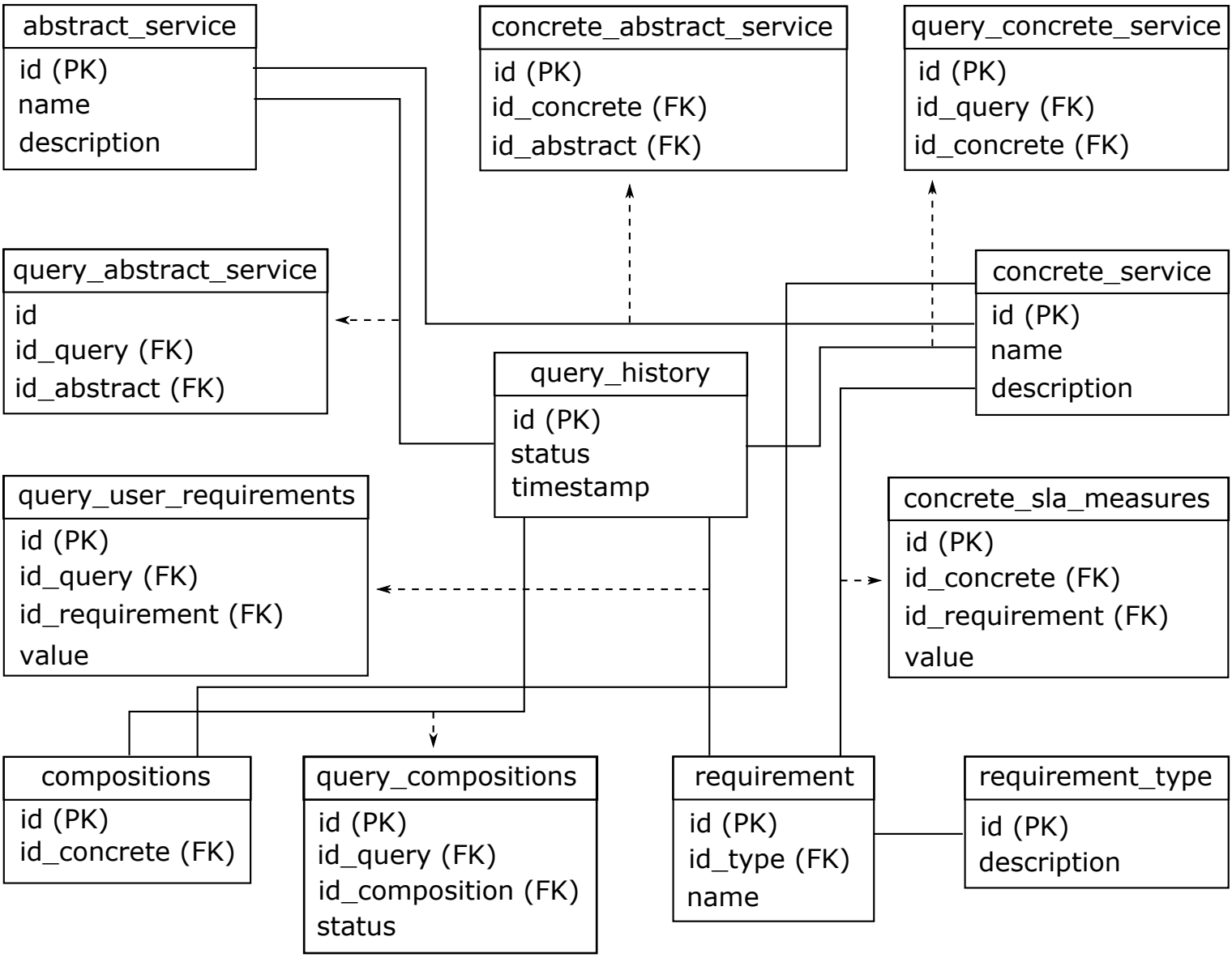

A query (table query_history) contains zero or more abstract services. An abstract service can be used in different queries. The table query_abstract_service is used to represent this relation many to many between query and abstract services.

A query can be answered by composing zero or more concrete services. A concrete service can be used to answer different queries. The table query_concrete_service is used to represent the many to many between query and concrete services. Moreover, it represents the set of data services selected to a query.

A concrete service is defined in terms of 1 or more abstract services. An abstract service can be used to define different concrete services. The table concrete_abstract_service represents this relation. A concrete service has a set of quality requirements (table requirement).
A requirement can be used to qualify different concrete services. This relation is represented in the table concrete_sla_measures. Moreover, a requirement has a type (requerement_type) that can be positive (as higher, better), negative (as lower, better) and none.

A query contains a set of user requirements. As in concrete services, the same requirement can be used in different queries. The table query_user_requirements represents this relation.

Compositions are defined in terms of concrete services. A concrete service can be used to rewrite different compositions.

Queries can be answerd by a series of compositions. The same composition can be used to answer different queries. This relation is represented by the table query_compositions.