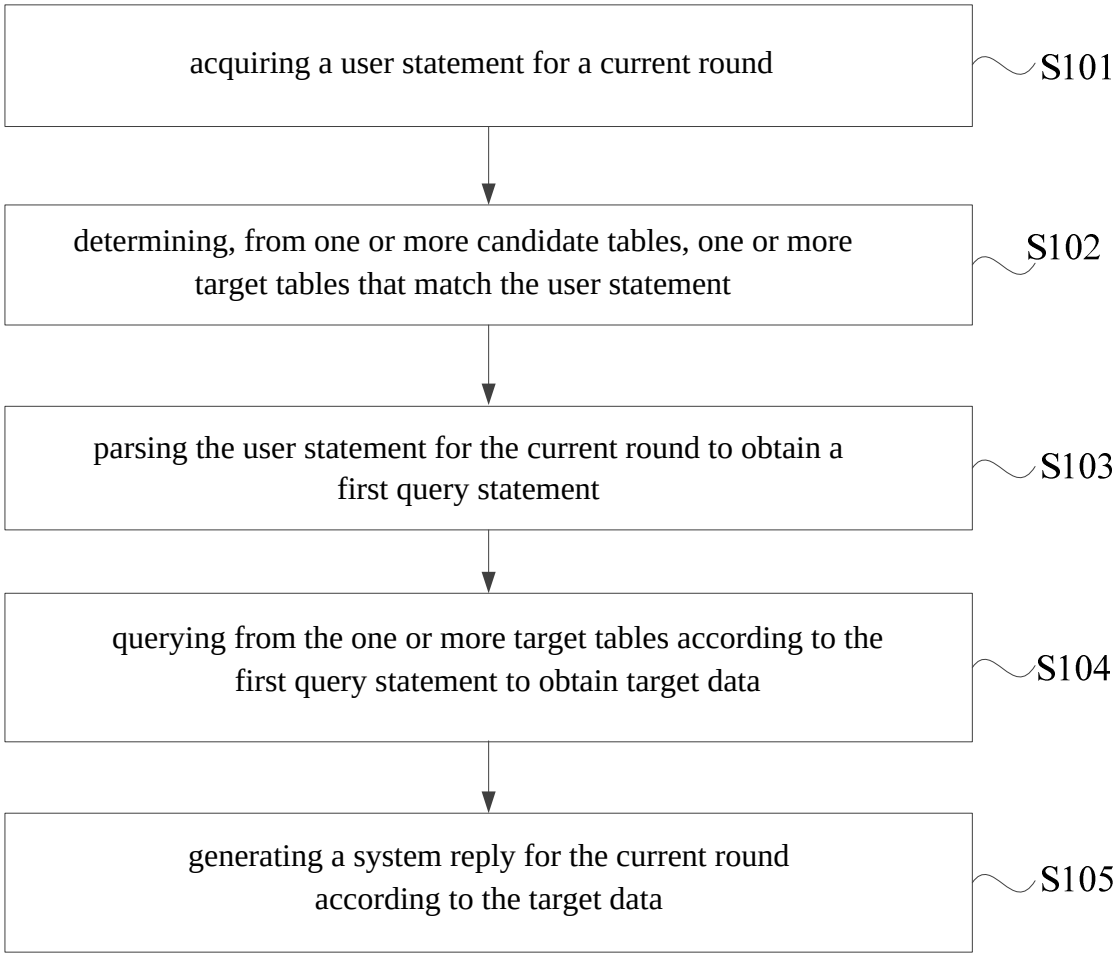

acquiring a user statement for a current round
S101
determining, from one or more candidate tables, one or more target tables that match the user statement
S102
parsing the user statement for the current round to obtain a first query statement
S103
querying from the one or more target tables according to the first query statement to obtain target data
S104
generating a system reply for the current round according to the target data
S105

FIG.1

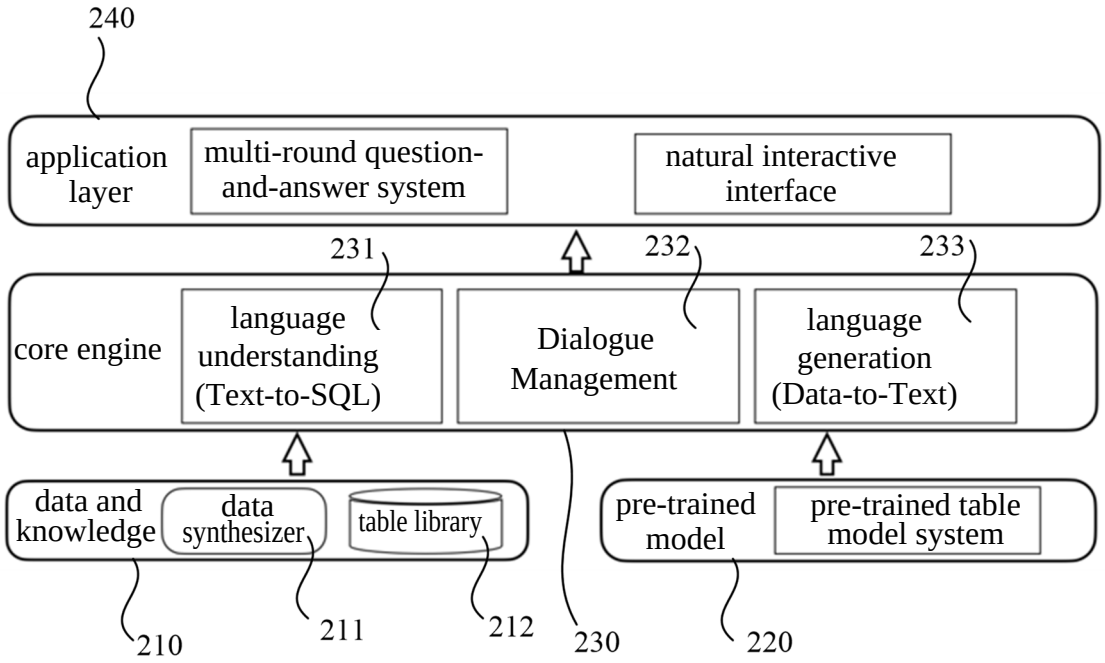

240
application layer
multi-round question-and-answer system
natural interactive interface
231
232
233
core engine
language understanding (Text-to-SQL)
Dialogue Management
language generation (Data-to-Text)
data and knowledge
data synthesizer
table library
pre-trained model
pre-trained table model system
210
211
212
230
220

FIG.2

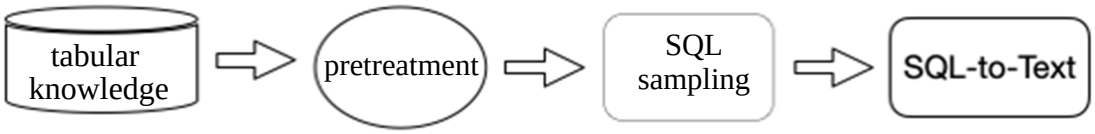

tabular knowledge
pretreatment
SQL sampling
SQL-to-Text

FIG.3

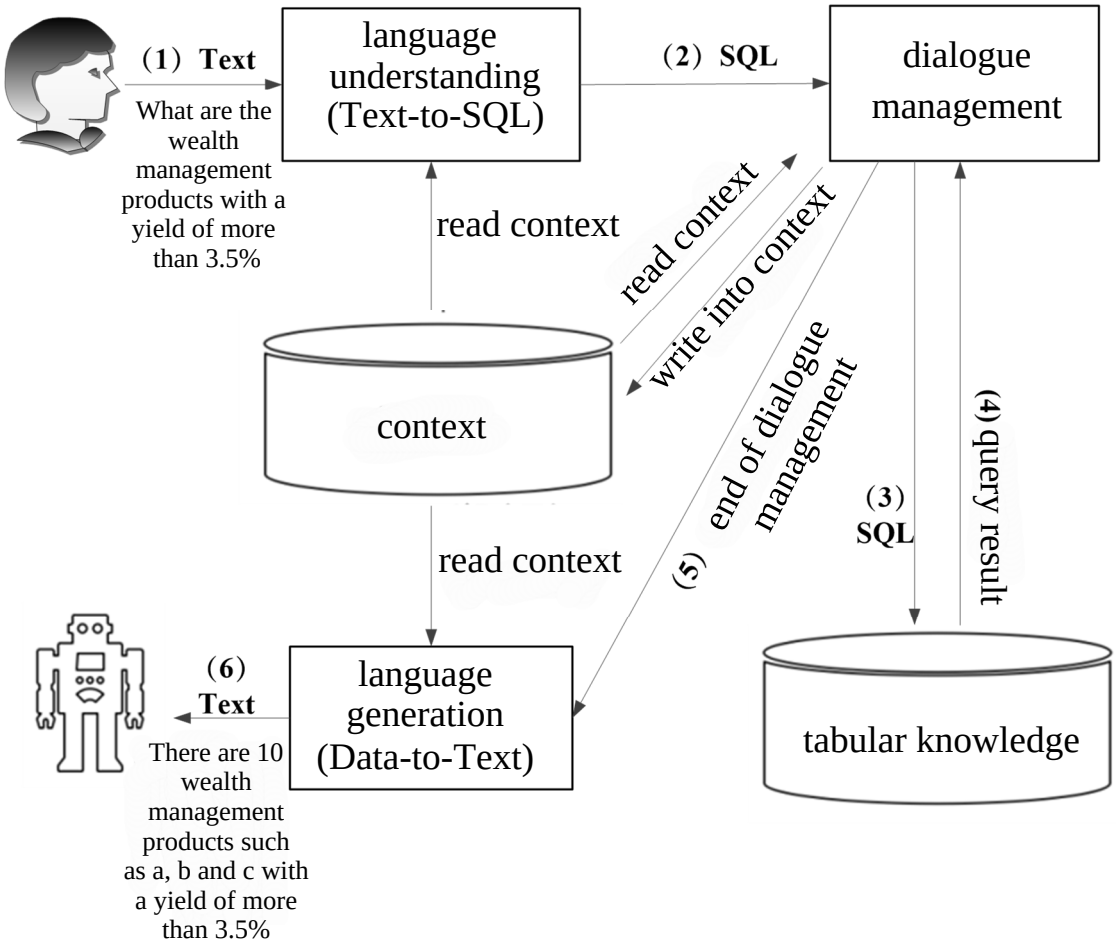

(1) Text
What are the wealth management products with a yield of more than 3.5%
language understanding (Text-to-SQL)
(2) SQL
dialogue management
read context
read context
write into context
context
end of dialogue management
(5)
(3) SQL
(4) query result
read context
(6) Text
There are 10 wealth management products such as a, b and c with a yield of more than 3.5%
language generation (Data-to-Text)
tabular knowledge

FIG.4

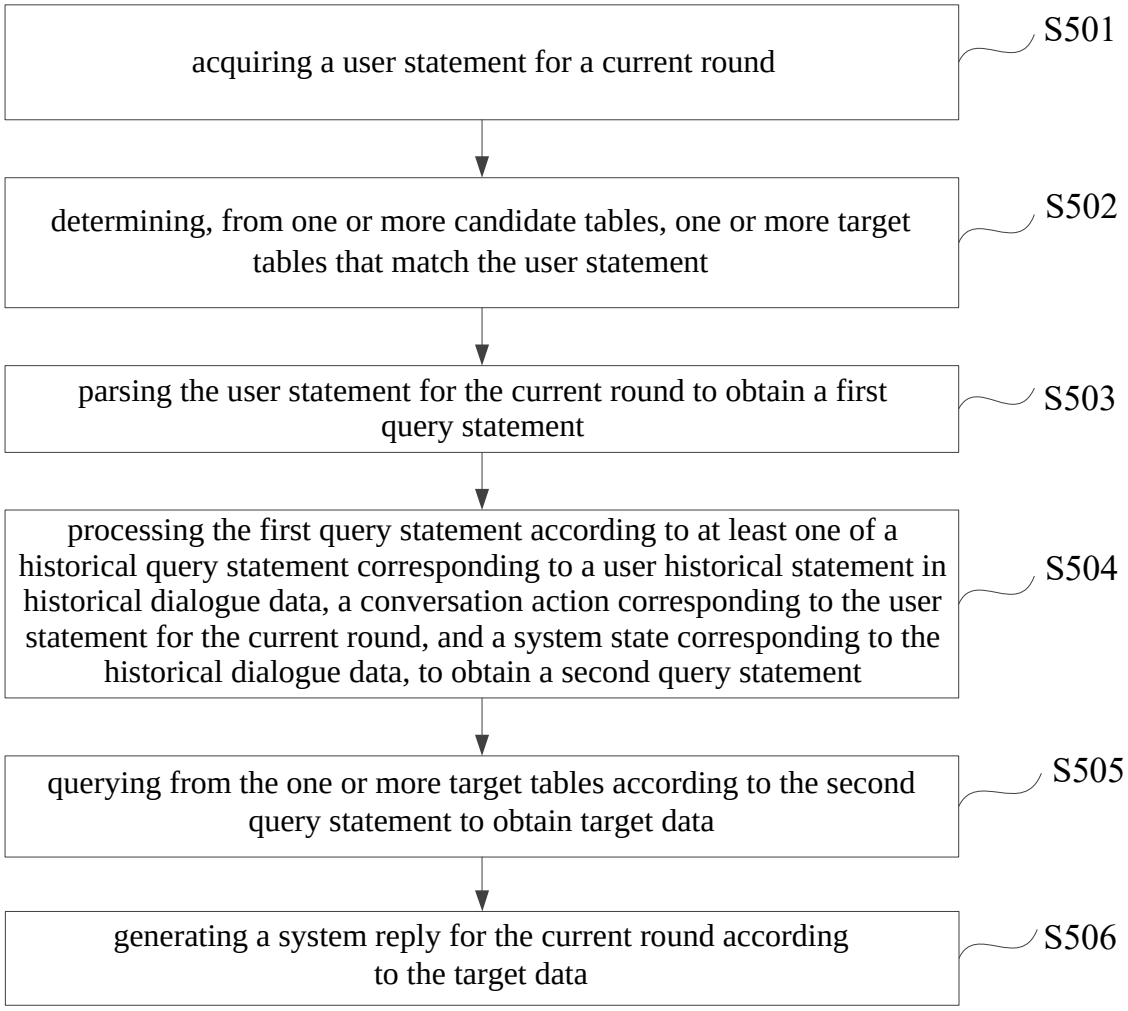

acquiring a user statement for a current round
S501
determining, from one or more candidate tables, one or more target tables that match the user statement
S502
parsing the user statement for the current round to obtain a first query statement
S503
processing the first query statement according to at least one of a historical query statement corresponding to a user historical statement in historical dialogue data, a conversation action corresponding to the user statement for the current round, and a system state corresponding to the historical dialogue data, to obtain a second query statement
S504
querying from the one or more target tables according to the second query statement to obtain target data
S505
generating a system reply for the current round according to the target data
S506

FIG.5

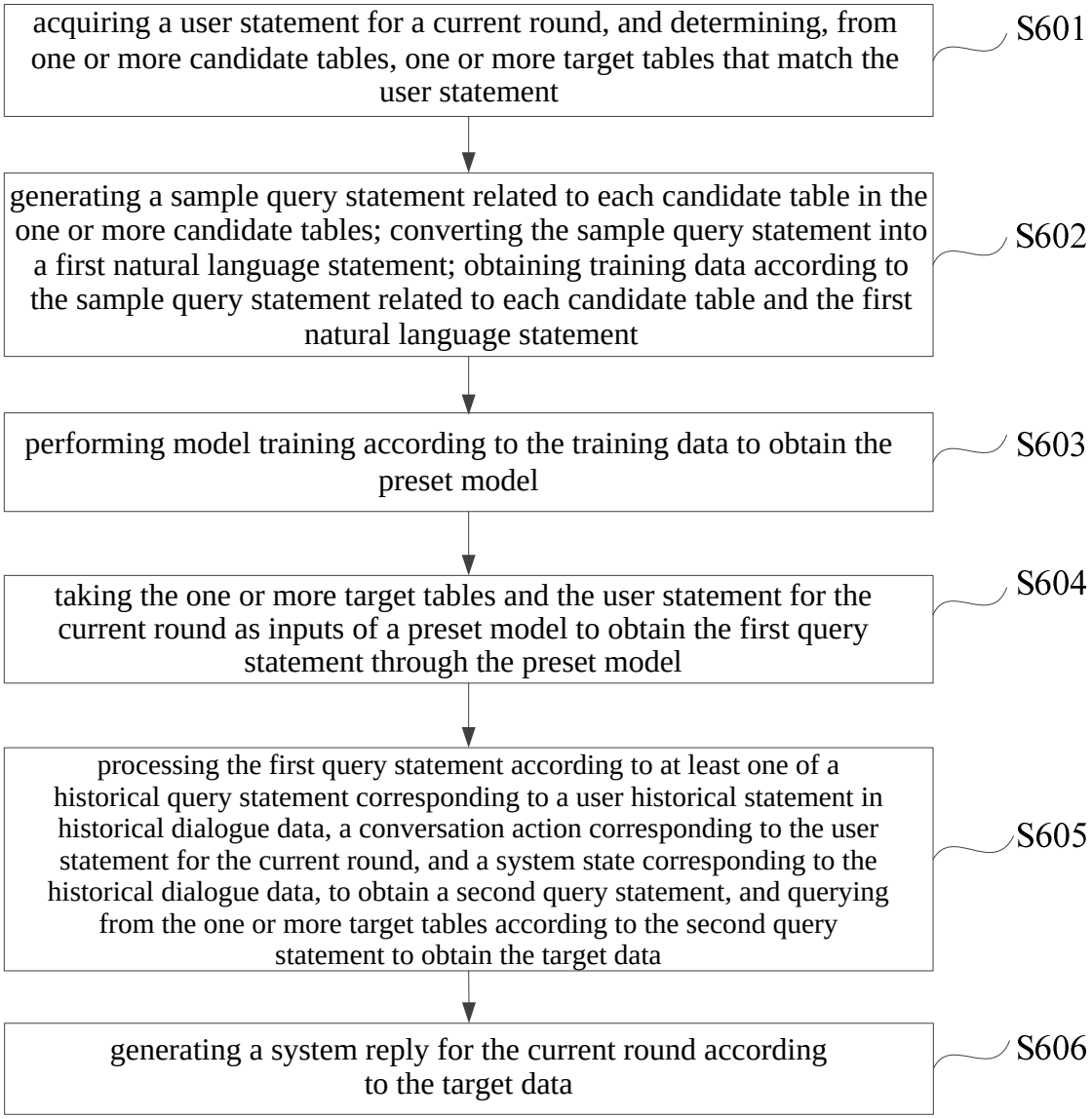

acquiring a user statement for a current round, and determining, from one or more candidate tables, one or more target tables that match the user statement
S601
generating a sample query statement related to each candidate table in the one or more candidate tables; converting the sample query statement into a first natural language statement; obtaining training data according to the sample query statement related to each candidate table and the first natural language statement
S602
performing model training according to the training data to obtain the preset model
S603
taking the one or more target tables and the user statement for the current round as inputs of a preset model to obtain the first query statement through the preset model
S604
processing the first query statement according to at least one of a historical query statement corresponding to a user historical statement in historical dialogue data, a conversation action corresponding to the user statement for the current round, and a system state corresponding to the historical dialogue data, to obtain a second query statement, and querying from the one or more target tables according to the second query statement to obtain the target data
S605
generating a system reply for the current round according to the target data
S606

FIG.6

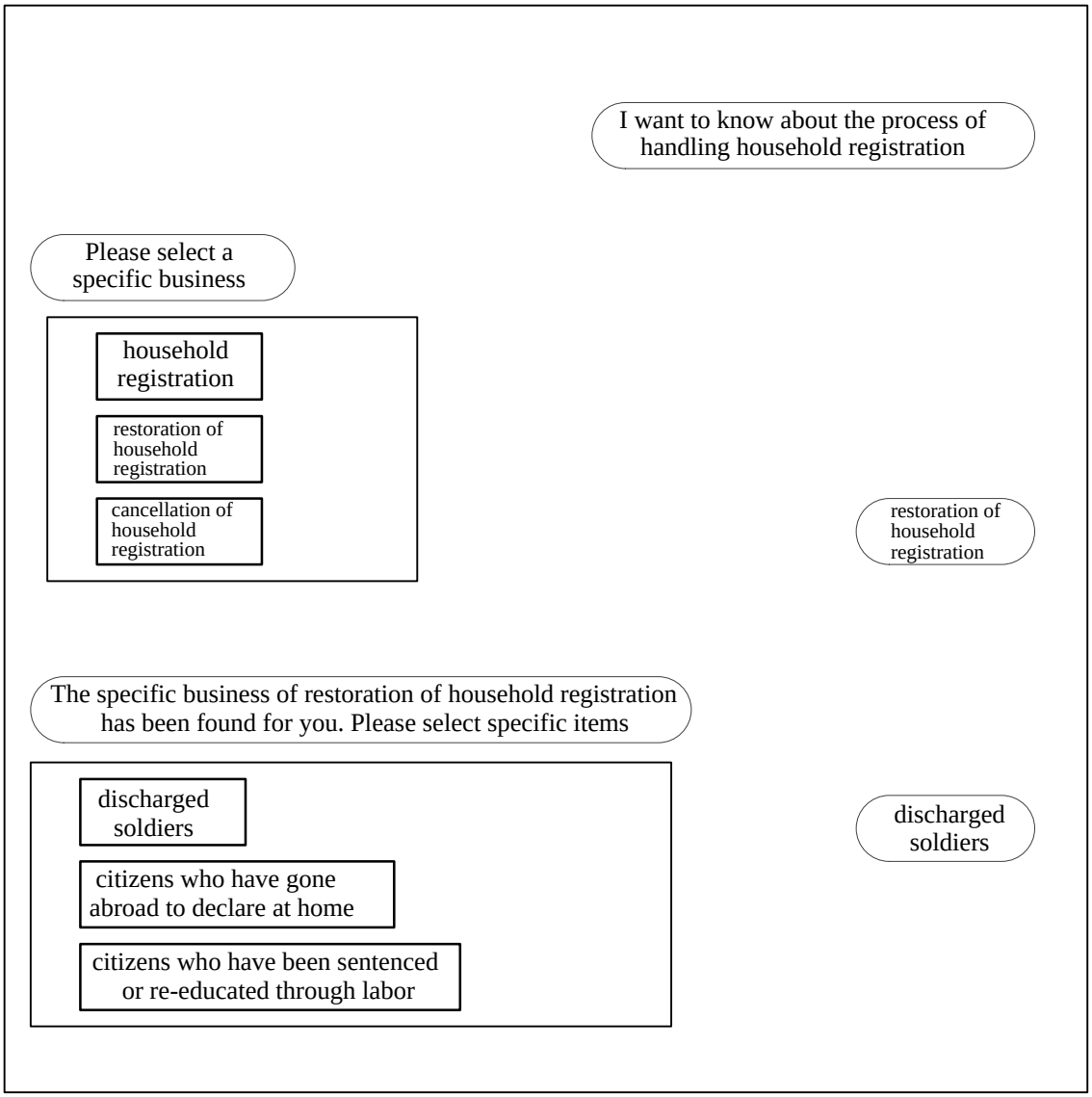

I want to know about the process of handling household registration
Please select a specific business
household registration
restoration of household registration
cancellation of household registration
restoration of household registration
The specific business of restoration of household registration has been found for you. Please select specific items
discharged soldiers
citizens who have gone abroad to declare at home
citizens who have been sentenced or re-educated through labor
discharged soldiers

FIG.7

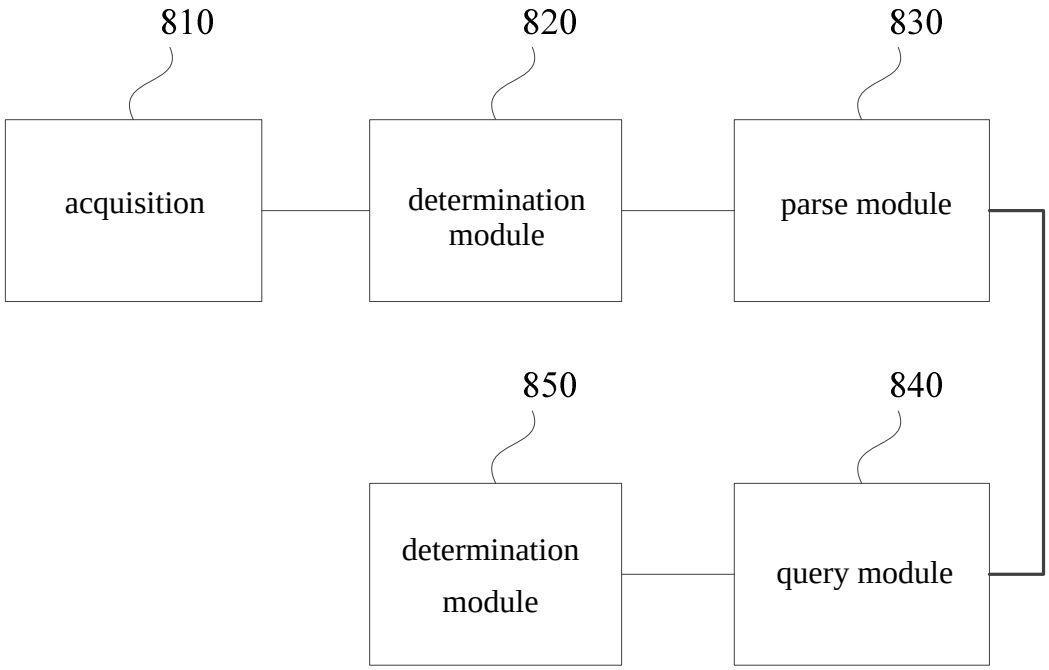

810
820
830
acquisition
determination module
parse module
850
840
determination module
query module

FIG.8

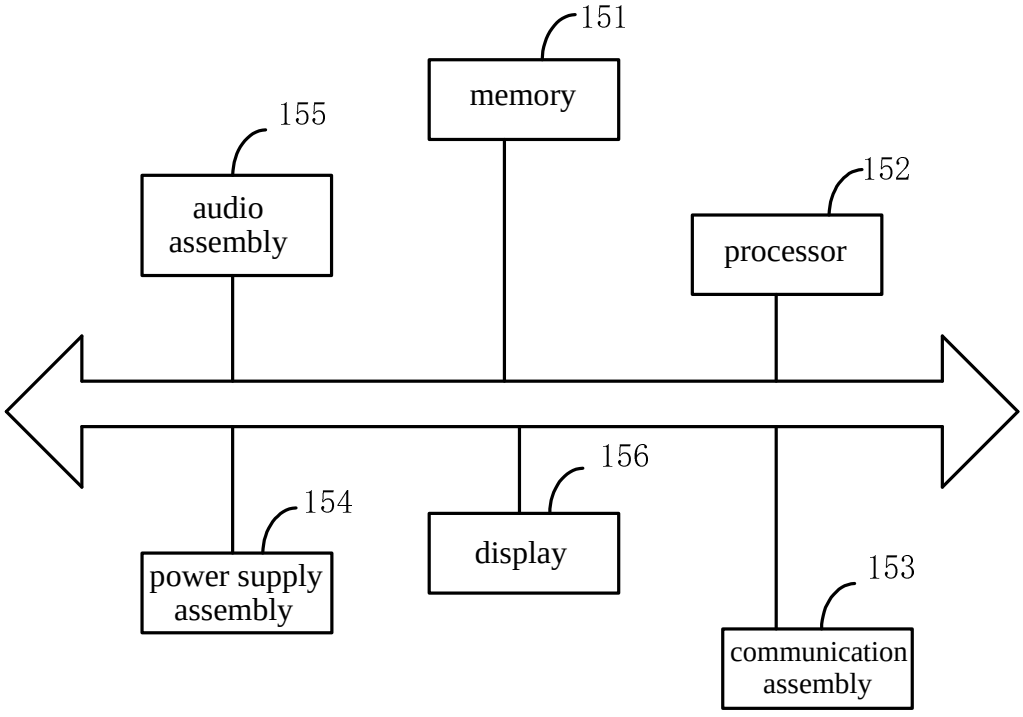

151
memory
155
audio assembly
152
processor
156
154
display
power supply assembly
153
communication assembly

FIG.9