CLAIMS

What is claimed is:

1. A question data generation method, comprising:

receiving user answer data that corresponds to current question data and that is sent by a terminal;

extracting a keyword from the user answer data based on a preset keyword extraction manner;

obtaining target data;

identifying target entities in the target data and entity relationships between the target entities;

building a knowledge graph in a preset building manner based on the target entities and the corresponding entity relationships;

querying the built knowledge graph based on the keyword for a matched entity and attribute;

based on the found entity and attribute, querying the knowledge graph for a plurality of entities associated with the entity through the attribute;

selecting a target associated entity from the associated entities;

generating the target question data based on the entity, the attribute, and the target associated entity;

and

sending the target question data to the terminal for display.

2. The method according to claim 1, wherein the extracting a keyword from the user answer data based on a preset keyword extraction manner comprises:

preprocessing the user answer data; and

extracting the keyword from the preprocessed user answer data in a preset keyword library-based matching manner.

3. The method according to any one of claims 1 to 2, wherein the user answer data comprises answer speech information; and the extracting a keyword from the user answer data based on a preset keyword extraction manner comprises:

performing speech recognition on the answer speech information to obtain corresponding answer speech text; and

extracting the keyword from the answer speech text based on the preset keyword extraction manner.

4. The method according to any one of claims 1 to 2, wherein the user answer data comprises user answer text and a user answering image; and before the querying a built knowledge graph based on the keyword for a matched entity and attribute, the method further comprises:

determining an answer score corresponding to the user answer text, and determining an expression score corresponding to the user answering image;

determining a corresponding comprehensive score based on the answer score and the expression score; and

querying the built knowledge graph based on the keyword for the matched entity and attribute when the comprehensive score is less than a preset score threshold.

5. The method according to claim 4, wherein the user answer data corresponds to a user identifier; and the method further comprises:

calculating a total amount of question data corresponding to the user identifier;

stopping a question data generation process when the calculated total amount reaches a preset total amount;

determining a total score corresponding to the user identifier based on comprehensive scores corresponding to the question data corresponding to the user identifier; and

pushing the total score to the terminal for display.

6. A question data generation apparatus, comprising:

a receiving module, configured to receive user answer data that corresponds to current question data and that is sent by a terminal;

an extraction module, configured to extract a keyword from the user answer data based on a preset keyword extraction manner;

a knowledge graph building module, configured to obtain target data; identify target entities in the target data and entity relationships between the target entities; and build a knowledge graph in a preset building manner based on the target entities and the corresponding entity relationships;

a query module, configured to query a built knowledge graph based on the keyword for a matched entity and attribute;

a generation module, configured to determine target question data based on the found entity and attribute; and

a sending module, configured to send the target question data to the terminal for display.

7. A computer device, comprising a memory and one or more processors, wherein the memory stores computer readable instructions, and when the computer readable instructions are executed by the one or more processors, the one or more processors are enabled to perform the following steps:

receiving user answer data that corresponds to current question data and that is sent by a terminal;

extracting a keyword from the user answer data based on a preset keyword extraction manner;

obtaining target data;

identifying target entities in the target data and entity relationships between the target entities;

building a knowledge graph in a preset building manner based on the target entities and the corresponding entity relationships;

querying the built knowledge graph based on the keyword for a matched entity and attribute;

based on the found entity and attribute, querying the knowledge graph for a plurality of entities associated with the entity through the attribute;

selecting a target associated entity from the associated entities;

generating the target question data based on the entity, the attribute, and the target associated entity;

and

sending the target question data to the terminal for display.

8. The computer device according to claim 7, wherein the extracting a keyword from the user answer data based on a preset keyword extraction manner comprises:

preprocessing the user answer data; and extracting the keyword from the preprocessed user

answer data in a preset keyword library-based matching manner.

9. The computer device according to any one of claims 7 to 8, wherein the user answer data comprises answer speech information; and the extracting a keyword from the user answer data based on a preset keyword extraction manner comprises:

performing speech recognition on the answer speech information to obtain corresponding answer speech text; and

extracting the keyword from the answer speech text based on the preset keyword extraction manner.

10. The computer device according to any one of claims 7 to 8, wherein the user answer data comprises user answer text and a user answering image; and when the computer readable instructions are executed by the processor, the processor further performs the following steps before querying the built knowledge graph based on the keyword for the matched entity and attribute:

determining an answer score corresponding to the user answer text, and determining an expression score corresponding to the user answering image;

determining a corresponding comprehensive score based on the answer score and the expression score; and

querying the built knowledge graph based on the keyword for the matched entity and attribute when the comprehensive score is less than a preset score threshold.

11. The computer device according to claim 10, wherein the user answer data corresponds to a user identifier; and when executing the computer readable instructions, the processor further performs the following steps:

calculating a total amount of question data corresponding to the user identifier;

stopping a question data generation process when the calculated total amount reaches a preset total amount;

determining a total score corresponding to the user identifier based on comprehensive scores corresponding to the question data corresponding to the user identifier; and

pushing the total score to the terminal for display.

12. One or more non-volatile computer readable storage media storing computer readable instructions, wherein when the computer readable instructions are executed by one or more

processors, the one or more processors are enabled to perform the following steps:

receiving user answer data that corresponds to current question data and that is sent by a terminal;

extracting a keyword from the user answer data based on a preset keyword extraction manner;

obtaining target data;

identifying target entities in the target data and entity relationships between the target entities;

building a knowledge graph in a preset building manner based on the target entities and the corresponding entity relationships;

querying the built knowledge graph based on the keyword for a matched entity and attribute;

based on the found entity and attribute, querying the knowledge graph for a plurality of entities associated with the entity through the attribute;

selecting a target associated entity from the associated entities;

generating the target question data based on the entity, the attribute, and the target associated entity;

and

sending the target question data to the terminal for display.

13. The one or more storage media according to claim 12, wherein the extracting a keyword from the user answer data based on a preset keyword extraction manner comprises:

preprocessing the user answer data; and

extracting the keyword from the preprocessed user answer data in a preset keyword library-based matching manner.

14. The one or more storage media according to any one of claims 12 to 13, wherein the user answer data comprises answer speech information; and the extracting a keyword from the user answer data based on a preset keyword extraction manner comprises:

performing speech recognition on the answer speech information to obtain corresponding answer speech text; and

extracting the keyword from the answer speech text based on the preset keyword extraction manner.