

10. The method of claim 9 wherein executing the first operation further comprises calculating the one or more of the attributes of the collection of data elements and sending the attributes to the software entity.

11. The method of claim 1 wherein a description of a collection and common attributes for the collection comprises:

a name of the collection; and

a description of a data structure defining the attributes.

12. The method of claim 1 wherein the first operation is a query and executing the first operation further comprises searching for individual data elements within the first collection and returning keys representing the individual data elements.

13. The method of claim 12 wherein the repository comprises a definition of the query comprising:

a search parameter structure of the query; and

an input name defining a key that is used for filtering one or more data from the collection of data.

14. The method of claim 1 further comprising

enabling a software entity to request a service represented in the repository, the service representing the first operation on one or more data elements in a second collection from the collections; and

executing the first operation on the one or more data elements in the second collection.

15. A system comprising:

a first computer configured to execute a client program;

a second computer configured to execute a server program;

a network linking the first and second computers such that the server program is configured to execute the following:

represent, in a repository, services from the server program, the services comprising interacting with one or more collections of data elements using a set of operations on the data elements in the collections, the repository comprising descriptions of the collections and common attributes for each collection, the repository organized according to a meta model;

enable the client program to request a service represented in the repository, the service representing a first operation on one or more data elements in a first collection from the collections; and

execute the first operation on the one or more data elements in the first collection.

16. The system of claim 15 wherein the repository further comprises descriptions of specialized actions on a collection of data elements from the collections.

17. The system of claim 16 wherein a description of a specialized action comprises:

a name of the specialized action;

a name of a data structure for input data for the specialized action;

a name of the collection of data elements.

18. The system of claim 15 wherein the set of operations correspond to methods of a service provider class.

19. The system of claim 18 wherein the set of operations comprise select, delete, select by relation, and update operations.

20. The system of claim 15 wherein the repository further comprises descriptions of relations between pairs of collections of data elements.

21. The system of claim 15 wherein the first collection has a relation with a second collection of data elements, a description of the relation is stored in the repository, and the relation enables the client program to request the retrieval of data elements of the second collection by specifying data elements of the first collection.

22. The system of claim 15 wherein the repository is a database.

23. The system of claim 15 wherein executing the first operation comprises reading the one or more of the attributes of the first collection of data elements from memory storage and sending the attributes to the client program.

24. The system of claim 23 wherein executing the first operation further comprises calculating the one or more of the attributes of the collection of data elements and sending the attributes to the software entity.

25. The system of claim 15 wherein a description of a collection and common attributes for the collection comprises:

a name of the collection; and

a description of a data structure defining the attributes.

26. The system of claim 15 wherein the first operation is a query and executing the first operation further comprises searching for individual data elements within the first collection and returning keys representing the individual data elements.

27. The system of claim 26 wherein the repository comprises a definition of the query comprising:

a search parameter structure of the query; and

an input name defining a key that is used for filtering one or more data from the collection of data.

28. The system of claim 15 further comprising:

enabling the client program to request a service represented in the repository, the service representing the first operation on one or more data elements in a second collection from the collections; and

executing the first operation on the one or more data elements in the second collection.