

We Claim:

1. A processor implemented method (200) comprising:

displaying (202), via an info slicer station implemented by one or more hardware processors, a plurality of slice objects, one or more information attributes in each of the plurality of slice objects and one or more report attributes for user selection, wherein the one or more report attributes comprise report type, report format, report title, and report frequency;

receiving (204), via the info slicer station, user selection comprising: a slice object among the plurality of slice objects, one or more information attributes of the slice object, one or more report attributes, and optionally one or more filters, grouping, splitting, and sorting conditions;

generating (206), via a context query generator implemented by the one or more hardware processors, a database query comprising a select clause, a from clause, and optionally a where clause, a join condition, a group by clause and an order by clause, wherein generating the data base query based on the user selection comprises:

creating (206a) the select clause comprising one or more database field names identified from the information attributes of the slice object using a metadata related to the slice object, wherein the metadata is a simplified representation of database that is generated for each of the plurality of slice objects by a metadata generator, implemented by the one or more hardware processors, based on (i) rules for transformation of database fields, (ii) metadata mapping to database fields in direct and transformed view, (iii) definition of join conditions for permutations and combinations of database fields in each of the plurality of slice objects, and (iv) business context of the database fields;

creating (206b) the from clause comprising one or more database table names identified using the metadata related to the slice object;

5 creating (206c) the where clause based on the one or more filters;

 creating (206d) the join condition if the one or more database field names belong to more than one database tables as specified in the metadata related to the slice object;

10 creating (206e) the group by clause from the grouping conditions and the splitting conditions; and

 creating (206f) the order by clause from the sorting conditions; executing (208), via an info-bite generator implemented by the one or more hardware processors, the database query to retrieve data from a database; and

15 generating (210), via the info-bite generator, a report based on the retrieved data and the one or more report attributes.

2. The method of claim 1, wherein the join condition is selected from a plurality of pre-defined join conditions in the metadata based on a weightage calculated for each of the plurality of join conditions as: ((number of columns matched as a foreign key between a main table and a join table in the join condition)² + pre-defined weightage of the main table + pre-defined weightage of the join table + (number of columns matched when there is no direct foreign key between the main table and the join table + 1)³ + unique ID of the slice object + 1 if the main table and the join table belong to a same data group within the slice object or 0 if the main table and the join table belong to different data groups within the slice object).

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3. A system (100), comprising:

a memory (102) storing instructions;

one or more communication interfaces (106); and

one or more hardware processors (104) coupled to the memory (102)

5 via the one or more communication interfaces (106), wherein the one or more hardware processors (104) are configured by the instructions to:

display, via an info slicer station, a plurality of slice objects, one or more information attributes in each of the plurality of slice objects and one or more report attributes for user selection, wherein the one or more report attributes
10 comprise report type, report format, report title, and report frequency;

receive, via the info slicer station, user selection comprising: a slice object among the plurality of slice objects, one or more information attributes of the slice object, one or more report attributes, and optionally one or more filters, grouping, splitting, and sorting conditions;

15 generate, via a context query generator, a database query comprising a select clause, a from clause, and optionally a where clause, a join condition, a group by clause and an order by clause, wherein generating the data base query based on the user selection comprises:

creating the select clause comprising one or more database field
20 names identified from the information attributes of the slice object using a metadata related to the slice object, wherein the metadata is a simplified representation of database that is generated for each of the plurality of slice objects by a metadata generator, implemented by the one or more hardware processors, based on (i) rules for transformation of database fields, (ii) metadata mapping to database fields in direct and
25 transformed view, (iii) definition of join conditions for permutations and combinations of database fields in each of the plurality of slice objects, and (iv) business context of the database fields;

- creating the from clause comprising one or more database table
 names identified using the metadata related to the slice object;
 creating the where clause based on the one or more filters;
 creating the join condition if the one or more database field
 5 names belong to more than one database tables as specified in the
 metadata related to the slice object;
 creating the group by clause from the grouping conditions and
 the splitting conditions; and
 creating the order by clause from the sorting conditions;
 10 execute, via an info-bite generator, the database query to retrieve data
 from a database; and
 generate, via the info-bite generator, a report based on the retrieved
 data and the one or more report attributes.
- 15 4. The system of claim 3, wherein the join condition is selected from a plurality
 of pre-defined join conditions in the metadata based on a weightage calculated
 for each of the plurality of join conditions as: $((\text{number of columns matched as a foreign key between a main table and a join table in the join condition})^2 + \text{pre-defined weightage of the main table} + \text{pre-defined weightage of the join table}$
 20 $+ (\text{number of columns matched when there is no direct foreign key between the main table and the join table} + 1)^3 + \text{unique ID of the slice object} + 1$ if the main
 table and the join table belong to a same data group within the slice object or 0
 if the main table and the join table belong to different data groups within the
 slice object).
- 25 5. One or more non-transitory machine-readable information storage mediums
 comprising one or more instructions which when executed by one or more
 hardware processors cause:

displaying, via an info slicer station, a plurality of slice objects, one or more information attributes in each of the plurality of slice objects and one or more report attributes for user selection, wherein the one or more report attributes comprise report type, report format, report title, and report frequency;

5 receiving, via the info slicer station, user selection comprising: a slice object among the plurality of slice objects, one or more information attributes of the slice object, one or more report attributes, and optionally one or more filters, grouping, splitting, and sorting conditions;

10 generating, via a context query generator, a database query comprising a select clause, a from clause, and optionally a where clause, a join condition, a group by clause and an order by clause, wherein generating the data base query based on the user selection comprises:

15 creating the select clause comprising one or more database field names identified from the information attributes of the slice object using a metadata related to the slice object, wherein the metadata is a simplified representation of database that is generated for each of the plurality of slice objects by a metadata generator, implemented by the one or more hardware processors, based on (i) rules for transformation of database fields, (ii) metadata mapping to database fields in direct and transformed view, (iii) definition of join conditions for permutations and combinations of database fields in each of the plurality of slice objects, and (iv) business context of the database fields;

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 creating the from clause comprising one or more database table names identified using the metadata related to the slice object;

25 creating the where clause based on the one or more filters;

 creating the join condition if the one or more database field names belong to more than one database tables as specified in the metadata related to the slice object;

- creating the group by clause from the grouping conditions and
 the splitting conditions; and
 creating the order by clause from the sorting conditions;
 executing, via an info-bite generator, the database query to retrieve data
 5 from a database; and
 generating, via the info-bite generator, a report based on the retrieved
 data and the one or more report attributes.
6. The one or more non-transitory machine-readable information storage mediums
 10 of claim 5, wherein the join condition is selected from a plurality of pre-defined
 join conditions in the metadata based on a weightage calculated for each of the
 plurality of join conditions as: $((\text{number of columns matched as a foreign key between a main table and a join table in the join condition})^2 + \text{pre-defined weightage of the main table} + \text{pre-defined weightage of the join table} + (\text{number of columns matched when there is no direct foreign key between the main table and the join table} + 1)^3 + \text{unique ID of the slice object} + 1 \text{ if the main table and the join table belong to a same data group within the slice object or } 0 \text{ if the main table and the join table belong to different data groups within the slice object})$.
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