CLAIMS

What is claimed is:

1. A method for searching for availability of hotel rooms, comprising the steps of:

generating a pre-compute database comprising real-time availability attributes associated with hotel rooms on a plurality of length of stays;

receiving a query for at least one hotel for a date range, the date range having a start date and an end date;

determining a first availability from the pre-compute database based at least in part on the query, the first availability being associated with at least one of the plurality of length of stays;

calculating ~~the availability of each day within the date range on a plurality of length of stays by applying business requirements according to the query~~based at least in part on the query, a second availability of each day within the date range on a plurality of length of stays, wherein the calculating is subject to business requirements that comprise one or more hotel-based requirements and one or more processing time-based requirements;

creating a final availability for each day within the date range on the plurality of length of stays by combining the first availability from the pre-compute database and the ~~query attributes~~second availability; and

formatting the final availability of hotel rooms for the at least one hotel for each day within the date range on the plurality of length of stays.

2. The method of claim 1, wherein the length of stay is represented by a bit map, with each bit representing a day in the length of stay.

3. The method of claim 1 or 2, wherein the query is received from a travel web site.

4. The method of claim 1 or 2, wherein the query is received from a client.

5. The method of any of the preceding claims ~~1~~, wherein the calculating step is performed with a fence rule.

6. The method of any of claims 1 to 4, wherein the calculating step is performed with a restriction rule.

7. The method of any of the preceding claims ~~1~~, further comprising the step of transmitting the final availability of hotel rooms to a travel web site.

8. The method of ~~claim 1~~ any of claims 1 to 6, further comprising the step of transmitting the final availability of hotel rooms to a client.

~~8.~~9. The method of any of the preceding claims, further comprising:

categorizing a plurality of steps of an availability query process into a plurality of categories, wherein the availability query process processes the query to output the final availability of hotel rooms;

associating a plurality of scores to the plurality of categories, wherein each score is based at least in part on a combination of database calls, discovery logic, and processing time;

prior to receiving the query, performing a step of the plurality of steps based at least in part on the corresponding score of the step to generate data of the pre-compute database; and

when logic is added to the availability query process, updating the scores associated with the plurality of categories and determining whether the step is to be performed after receiving the query based at least in part on the updated scores.

~~9.~~10. A system for searching for availability of hotel rooms, comprising:

means for generating a pre-compute database comprising real-time availability attributes associated with hotel rooms on a plurality of length of stays;

means for receiving a query for at least one hotel for a date range, the date range having a start date and an end date;

means for determining a first availability from the pre-compute database based at least in part on the query, the first availability being associated with at least one of the plurality of length of stays;

means for calculating ~~the availability of each day within the date range on a plurality of length of stays by applying business requirements according to the query~~ based at least in part on the query, a second availability of each day within the date range on a plurality of length of stays, wherein the calculating is subject to business requirements that comprise one or more hotel-based requirements and one or more processing time-based

requirements;

means for creating a final availability for each day within the date range on the plurality of length of stays by combining the first availability from the pre-compute database and the ~~query attributes~~ second availability; and

means for formatting the final availability of hotel rooms for the at least one hotel for each day within the date range on the plurality of length of stays.

~~10~~11. The system of claim ~~1~~10, wherein the length of stay is represented by a bit map, with each bit representing a day in the length of stay.

~~11~~12. The system of claim ~~1~~10 or 11, wherein the query means receives the query from a travel web site.

~~12~~13. The system of claim ~~1~~10 or 11, wherein the query means receives the query from a client.

~~13~~14. The system of any of claims ~~1~~10 to 13, wherein the calculating means performs the calculation with a fence rule.

~~14~~15. The system of any of claims ~~1~~10 to 13, wherein the calculating means performs the calculation with a restriction rule.

~~15~~16. The system of any of claims ~~1~~10 to 15, further comprising means for transmitting the final availability of hotel rooms to a travel web site.

~~16~~17. The system of any of claims ~~1~~10 to 15, further comprising means for transmitting the final availability of hotel rooms to a client.

~~17~~18. A computer program product, comprising a computer usable medium having a computer-readable program code embodied therein, the computer-readable program code adapted to be executed to implement a method for searching for availability of hotel rooms, comprising:

generating a pre-compute database comprising real-time availability attributes associated with hotel rooms on a plurality of length of stays;

receiving a query for at least one hotel for a date range, the date range having a start date and an end date;

determining a first availability from the pre-compute database based at least in part on the query, the first availability being associated with at least one of the plurality of length of stays;

calculating ~~the availability of each day within the date range on a plurality of length of stays by applying business requirements according to the query~~ based at least in part on the query, a second availability of each day within the date range on a plurality of length of stays, wherein the calculating is subject to business requirements that comprise one or more hotel-based requirements and one or more processing time-based requirements;

creating a final availability for each day within the date range on the plurality of length of stays by combining the first availability from the pre-compute database and the ~~query attributes~~second availability; and

formatting the final availability of hotel rooms for the at least one hotel for each day within the date range on the plurality of length of stays.