~~WE CLAIM:~~CLAIMS

1. A system to predict elapsed response time for a query during an application development stage, the system comprising:

a processor; and

a memory coupled to the processor, wherein the processor is capable of executing a plurality of modules stored in the memory, and wherein the plurality of module comprising:

a query execution module configured to execute the query over a database in order to collect database statistics;

an emulation module configured to emulate the database in order to obtain an emulated database wherein the database statistics are emulated based on a production database;

a classification module configured to classify the query into at least one of a full table scan query, fast index scan query, primary index scan query and a non-unique index scan query based upon a mode of access of the emulated database by the query;

a parameter determination module configured to determine, an access pattern along with one or more parameters with respect to the emulated database, wherein the access pattern, the parameters and the query are sensitive to a size of the emulated database;

and

a computational module configured to:

calculate an input-output access time of the query on the emulated database by using a classification specific technique corresponding to the at least one of the full table scan query, fast index scan query, primary index scan query and a non-unique index scan query ~~over the access pattern~~ and the one or more parameters; and

determine the elapsed response time of the query for the emulated database by using the input-output access time for varying size of the database.

2. The system of claim 1, wherein the query is executed over a small size database.

~~3. The system of claim 1, wherein the classification module classifies the query into at least one of a full table scan query and an index scan query, and wherein the index scan~~

~~query further comprises of a fast index scan query, a primary index scan query and a Non-unique index scan query.~~

43. The system of claim 13, wherein the one or more parameters comprises of a table schema and a projected size of the table for each of the full table scan query, the fast index scan query, the primary index scan query and the non-unique index scan query.

54. The system of claim 1, wherein the emulation module is configured to extrapolate the access pattern along with the one or more parameters to obtain the emulated database.

65. The system of claim 1, wherein the computing module adds the input-output access time to a linearly extrapolated CPU time in order to determine the elapsed response time of the query.

76. The system of claim 1, wherein the emulated database further comprises of an emulated large size database.

87. A method to predict elapsed response time for a query during an application development stage, the method comprising:

executing the query over a database in order to collect database statistics;

emulating the database in order to obtain an emulated database wherein the database statistics are emulated based on a production database;

classifying the query so executed into at least one of a full table scan query, fast index scan query, primary index scan query and a non-unique index scan query based upon a mode of access of the emulated database by the query;

determining an access pattern along with one or more parameters with respect to the emulated database, wherein the access pattern, the parameters and the query are sensitive to a size of the emulated database;

calculating an input-output access time for the query on the emulated database by using a classification specific technique corresponding to the at least one of the full table scan query, fast index scan query, primary index scan query and a non-unique index scan query ~~over the access pattern~~ and the one or more parameters; and

determining the elapsed response time for the query by using the input-output access time for varying size of the database;

wherein the executing, the classifying, the determining access pattern along with one or more parameters, the emulating, the calculating and the determining elapsed response time are performed by the processor.

~~9. The method of claim 8, wherein the queries are classified into at least one of a full table scan query or an index scan query, and wherein the index scan query further comprises of a fast index scan query, a primary index scan query and a Non-unique index scan query.~~

~~10~~8. The method of claim ~~7~~9, wherein the parameters so determined further comprises of a table schema and a projected size of the table for each of the full table scan query, the fast index scan query, the primary index scan query and the non-unique index scan query.

~~11~~9. The method of claim ~~8~~7, wherein the access pattern and the one or more parameters are extrapolated in order to obtain the emulated database.

~~12~~10. The method of claim ~~8~~7, wherein the input-output access time is added to a linearly extrapolated CPU time to determine the elapsed response time of the query.

~~13~~11. The method of claim ~~8~~7, wherein the input-output access time further comprises of storage access time and network transfer time of the query.

~~14~~12. A computer program product having embodied thereon a computer program to predict elapsed response time for a query during an application development stage,, the computer program product comprising:

a program code for executing the query over a database in order to collect database statistics;

a program code for emulating the database in order to obtain an emulated database wherein the database statistics are emulated based on a production database;

a program code for classifying the query so executed into at least one of a full table scan query, fast index scan query, primary index scan query and a non-unique index scan query based upon a mode of access of the emulated database by the query;

a program code for determining an access pattern along with one or more parameters with respect to the emulated database, wherein the access pattern, the parameters and the query are sensitive to a size of the emulated database;

and

a program code calculating an input-output access time for the query on the emulated database by using a classification specific technique corresponding to the at least one of the full table scan query, fast index scan query, primary index scan query and a non-unique index scan query ~~over the access pattern~~ and the one or more parameters; and

a program code determining the elapsed response time for the query by using the input-output access time for varying size of the database.