**Laboratory Report Cover Sheet   
DeVry University  
College of Engineering and Information Sciences**

**Course Number: DBM-438**

**Professor:**

**Laboratory Number:** 1

**Laboratory Title:** Comparison of MySQL, Oracle and SQL Server Database architectures

**Submittal Date:** 3/6/2016

***Objectives:* The objective in Week 1 iLab is to compare MySQL, Oracle, and SQL Server from at least 10 different areas. We are given 5 different areas that we will be comparing between the 3 different software and we will have to add 5 of our own areas to do research on to find out more information. The 5 that I will be adding are processor required, processor type, operating system, licensing, and language support.**

***Comparison Form—Use the template below to begin your comparison and expand as needed.***

|  |  |  |  |
| --- | --- | --- | --- |
| **Element Compared** | **MySQL** | **Oracle** | **SQL Server** |
| Disk space required | 800 MB | 3.5-5 GB | 6.0 GB |
| Memory required | 8 GB | 1 GB | 1 GB |
| Database authentication | Authentication Using SSL or Third-Party Services | Old Password Authentication or Secure Password Authentication | Windows Authentication mode and mixed mode |
| Schema objects | Clusters Constraints Database links Database triggers Dimensions External procedure libraries Index-organized tables Indexes Index types Java classes, Java resources, Java sources Materialized views Materialized view logs Object tables Object types Object views Operators Packages Sequences Stored functions, stored procedures Synonyms Tables Views | AFTER trigger, BEFORE trigger, Check constraint, Column default Database, Foreign key, Index, Package, PL/SQL function, PL/SQL procedure, Primary key, Role, Schema, Sequence, Snapshot Synonym, Table, Tablespace, Temporary table, Trigger for each row, Unique Key, User, View | Table, Data types, Function, Index, Clustered index, Non-clustered, Unique index, Constraint, Primary Key Constraint, Foreign Key Constraint, Unique Key Constraint, Check Key Constraint, Rule, Default, Stored Procedures, Trigger, View |
| Data types | CHAR(SIZE)  VARCHAR(SIZE)  TINYTEXT  TEXT  BLOB  MEDIUMTEXT  MEDIUMBLOB  LONGTEXT  LONGBLOB  ENUM  SET  DATE()  DATETIME()  TIMESTAMP()  TIME()  YEAR() | CHAR(SIZE)  VARCHAR(SIZE)  NVARCHAR2(SIZE)  VARCHAR2(SIZE)  LONG  RAW  LONG RAW | CHAR(N)  VARCHAR(N)  VARCHAR(MAX)  TEXT  NCHAR  NVARCHAR  NVARCHAR(MAX)  NTEXT  BIT  BINARY(N)  VARBINARY  VARBINARY(MAX)  IMAGE  DATETIME  DATETIME2  SMALLDATETIME  DATE  TIME  DATETIMEOFFSET  TIMESTAMP  SQL\_VARIANT  UNIQUEIDENTIFIER  XML  CURSOR  TABLE |
| Processor required | 2.0 GHz or Faster | 550 MHz minimum | 2.0 GHz or faster |
| Processor Type supported | x64 Processor: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support | On Windows Vista, the minimum requirement is 800 MHz | 4 CPU Cores or more   * x64 Processor: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support * x86 Processor: Pentium III-compatible processor or faster |
| Operating System Support | Windows, Linux, OS X, FreeBSD, Solaris | Windows, Linux, Solaris, HP-UX, OS X, z/OS, AIX | Windows |
| Language Support | Many, including C, C#, C++, D, Java, Ruby, and Objective C | Many, including C, C#, C++, Java, Ruby, and Objective C | Java, Ruby, Python, VB, .Net, and PHP |
| Licensing | Open source | Proprietary | Proprietary |

***Conclusions:* I found week 1 to be very informative and useful. We were required to compare and contrast between Oracle, MySQL, and SQL Server using 10 different areas. I found that Oracle and SQL Server requires a lot more disk space required than MySQL. In conclusion, I find that the comparison shows just how similar the databases are and it is up to the user to decide which is best depending on the situation rather than which program is better.**

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| ***Student:*** | Kevin Nguyen |  | Week 1 |  | KN |
|  | Name |  | Program |  | Signature |