

# Research on Evaluation Performance of Relational Database

**Ghusoon Idan Arb**

Mustansiriyah University, Assist Lecturer Computer Engineering Dept., Baghdad.

Email - eng.computer38@gmail.com

**Abstract:** This paper focuses on the creation of a single system for distribution to a team of developers. Oracle Form Builder are popular and made the function of project expansion easier and comparably faster to reduce costs and improve performance levels for users. Design of administration system in client side is made available to employees to assist them in the performance of their job duties. Both Oracle Database and MySQL are strong relational database management systems that effectively run great amounts of data. Oracle Database is a full distinct database engine that has successfully passed severe security exams and has excelled in performance benchmarks. With built-in backup for PL/SQL and Java. Oracle focusing on Java for next generation commerce applications.

**Key Words:** Oracle Database, MySQL, severe security, system access.

## 1. INTRODUCTION:

In the range of security, the popularization and application of Internet, communications and computer connection technology has been quick development, , work and live [1]. In this paper we distinguish The System Global Area (SGA) and other memory areas, Database related files, Database concerning background processes, Table spaces and Data files, the instance and the database. Database instance has many background processes based on configuration. System Global Area is shared memory for SMON, PMON, DBWR, LGWR, ARCH, RECO, etc. Recovery Manager (RMAN) supports spicy backups and action as a separate central repository for manifold Oracle database servers.

## 2. MATERIALS:

we divide the checking of the components of an Oracle system into two master regions —Oracle operating system files (the physical entities) and Oracle database objects (the logical entities). A basic database security system, an audit system, and a user account repair application . Oracle supply highly clarify gained authorization controls to end system access. intercepting access should inclusive applying the principal of lower privilege [1].

## 3. ORACLE MEMORY STRUCTURE:

The memory structure means sorting of logical memory for many processes of oracle see figure (1). The memory structures with Oracle Database include: System global area (SGA) and Program global area (PGA). SGA is a collection of common memory, known as SGA strains, that comprise data and control files for one Oracle Database instance. paradigms of data stored in the SGA contain cached data blocks and common SQL regions. A PGA is a not common memory region that contains data and control files exclusively for use by an oracle operation The PGA is formed by Oracle Database when an oracle operation is initiated [2].

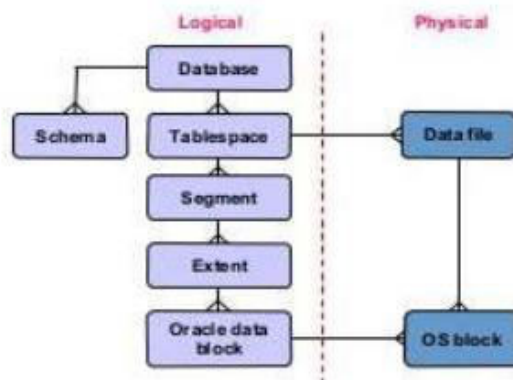


Fig 1: Memory Structure

### Client / Server System:

Oracle network services dealing with network connexions from a client or middle-tier implementation to the server. After a network hearing is instituted, oracle network acts as the data messenger for both the client and the server. It is accountable for foundation and repairing the link between the client and server, as well as substitute data between them.

oracle network such as Java Database Connectivity (JDBC), is existing on each pc that necessarily for talking to the server. On the client ,oracle net is a background component accessed by whatever program needs connecting to the database such as oracle forms. The client not sees oracle network, simply the program that is using it. On the server,

oracle network includes an quick operation called the listener. The oracle network listener is dependable for coordinating connexions between the database and foreign programs. Without the listener, foreign connexions to the database are impossible. While the most collective use of oracle network is allowing arrivals database communications, services also can be configured for allowing enter to foreign program libraries and commands and connecting , see figure(2)[3].

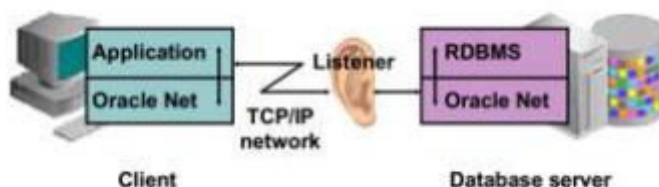


Fig 2:Client/ Server Connection

### Creating an Employee Self-Service Requestor Form:

In figure (3) show employees table consist of :

1. employees \_id, type of data in number and the number of character(6).
2. First name, type of data in varchar2 and the number of character(20).
3. Last name, type of data in varchar2 and the number of character(25).
4. Email ,type of data in varchar2 and the number of character(25).
5. Phone number, type of data in number and the number of character(20).
6. Hair \_date, type of data not null enable.
7. Job\_id, type of data in varchar2 and the number of character(10).
8. salary, type of data in number and the number of character(8).
9. commission\_pct, type of data in number and the number of character(2).
10. manager\_id, type of data in number and the number of character(6).
11. department\_id, type of data in number and the number of character(4).

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
100	Lucas	King	l.king@oracle.com	503.650.3899	21/04/07	AD_ASST	2400	(null)	104	50
101	John	De Haan	j.dehaan@oracle.com	503.650.4866	13/01/08	AD_VP	2900	(null)	104	50
102	Neena	Kochhar	n.kochhar@oracle.com	503.650.5620	21/09/02	AD_EMP	4400	(null)	102	50
103	Lex	De Haan	l.dehaan@oracle.com	503.650.4866	13/01/08	AD_EMP	4900	(null)	103	50
104	Alexander	Tootz	a.tootz@oracle.com	503.650.5620	17/03/04	AD_EMP	3300	(null)	104	50
105	Julia	Abadi	j.abadi@oracle.com	503.650.4866	17/03/04	AD_EMP	4300	(null)	105	50
106	Walter	Tello	w.tello@oracle.com	503.650.5620	17/03/04	AD_EMP	3500	(null)	106	50
107	Jason	Mallin	j.mallin@oracle.com	503.650.4866	17/03/04	AD_EMP	4100	(null)	107	50
108	Michael	Stiles	m.stiles@oracle.com	503.650.5620	17/03/04	AD_EMP	3900	(null)	108	50
109	Pat	Haas	p.haas@oracle.com	503.650.4866	17/03/04	AD_EMP	4800	(null)	109	50
110	Anthony	Pavlow	a.pavlow@oracle.com	503.650.5620	17/03/04	AD_EMP	4900	(null)	110	50
111	Hermann	Baer	h.baer@oracle.com	503.650.4866	17/03/04	AD_EMP	4000	(null)	111	50
112	Serge	Brace	s.brace@oracle.com	503.650.5620	17/03/04	AD_EMP	4100	(null)	112	50
113	Shelley	Stevens	s.stevens@oracle.com	503.650.4866	17/03/04	AD_EMP	4500	(null)	113	50
114	David	Turner	d.turner@oracle.com	503.650.5620	17/03/04	AD_EMP	5300	(null)	114	50
115	Diana	Greenberg	d.greenberg@oracle.com	503.650.4866	17/03/04	AD_EMP	6100	(null)	115	50
116	Ismael	Fouad	i.fouad@oracle.com	503.650.5620	17/03/04	AD_EMP	6000	(null)	116	50
117	Oliver	Tobias	o.tobias@oracle.com	503.650.4866	17/03/04	AD_EMP	7800	(null)	117	50
118	Peter	Baer	p.baer@oracle.com	503.650.5620	17/03/04	AD_EMP	8200	(null)	118	50
119	Sundar	Pandey	s.pandey@oracle.com	503.650.4866	17/03/04	AD_EMP	8500	(null)	119	50
120	Timothy	Gietz	t.gietz@oracle.com	503.650.5620	17/03/04	AD_EMP	9000	(null)	120	50
121	Jones	Whalen	j.whelen@oracle.com	503.650.4866	17/03/04	AD_EMP	9500	(null)	121	50
122	Michael	Green	m.green@oracle.com	503.650.5620	17/03/04	AD_EMP	10000	(null)	122	50
123	Michael	Stiles	m.stiles@oracle.com	503.650.4866	17/03/04	AD_EMP	10500	(null)	123	50
124	Michael	Stiles	m.stiles@oracle.com	503.650.5620	17/03/04	AD_EMP	11000	(null)	124	50
125	Michael	Stiles	m.stiles@oracle.com	503.650.4866	17/03/04	AD_EMP	11500	(null)	125	50
126	Michael	Stiles	m.stiles@oracle.com	503.650.5620	17/03/04	AD_EMP	12000	(null)	126	50
127	Michael	Stiles	m.stiles@oracle.com	503.650.4866	17/03/04	AD_EMP	12500	(null)	127	50
128	Michael	Stiles	m.stiles@oracle.com	503.650.5620	17/03/04	AD_EMP	13000	(null)	128	50
129	Michael	Stiles	m.stiles@oracle.com	503.650.4866	17/03/04	AD_EMP	13500	(null)	129	50
130	Michael	Stiles	m.stiles@oracle.com	503.650.5620	17/03/04	AD_EMP	14000	(null)	130	50

Fig 3: Employees Table

In figure (4) and figure(5) show many tasks are designed in oracle form builder such as query, insert, delete records as GUI

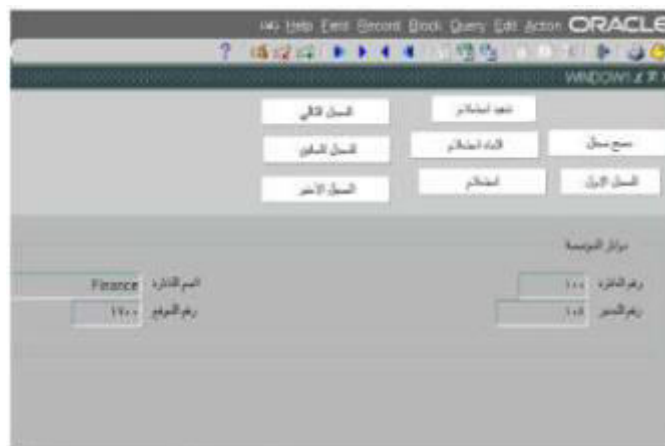


Fig 5: Administration System

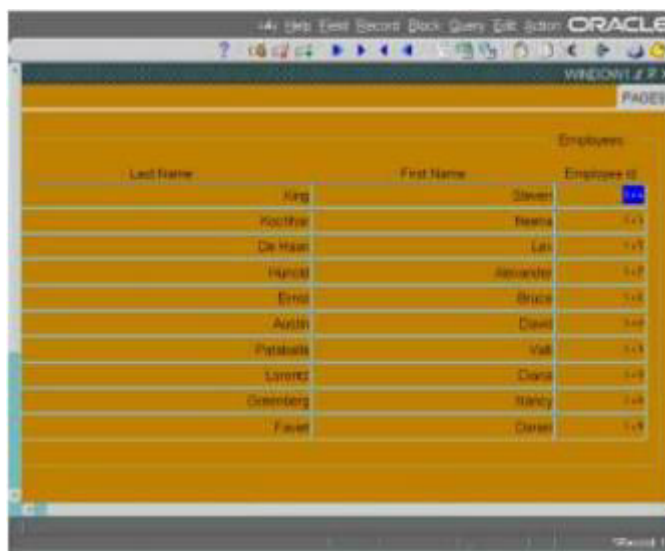


Fig 6: Employees Table in Form Builder

**ADMINISTRATION SYSTEM OBJECTS:**

Objects that are used in administration system in with oracle can be raise the performance of back data. This objects describe below:

## Schema

Schema objects are client-created frameworks that reference to the information in the system. The system backup numerous types of schema, the most important of which are tables and indexes. A schema object is one type of database object. Some objects such as profiles and roles, do not notification in schemas [4].

## Index

An index is an volitional data framework that we can activate on one or more columns of a table. Indexes can raise the performance of back data. When conversion a call, the database can use ready indexes to define the called archives efficiently. Indexes are helpful when sustem often request a specific information. Indexes are logically and physically separate of the data. Thus, we can delete and make indexes with no influence on the tables or other indexes [4].

## CONCLUSION:

The administration system is interfacing database Oracle Form Builder software to easy interface between user and database and enhance performance and security. Companies use Oracle Form Builder for application development requiring the capabilities that MySQL does not offer such as it includes a procedural language to develop stored procedures, triggers, and functions, views. Design of administration system in client is made available to employees to assist them in the performance of their job duties.

## REFERENCES:

1. Marlene Theriault ,William Heney,1998, Publisher: O'Reilly.
2. P. Sai Prathap Pullagura, A. Gokilavani , 2014 : Defeating SQL Injection on Preventing Run Time Attacks , The International Journal Of Science & Technology.
3. White Paper, March 2004, OracleDatabase 10g: Administration WorkshopI, First Edition.
4. Lance Ashdown, Tom Kyte, 2015, Oracle Database concepts, 12c .Release1 (12, 1) E 4139613.