My Report

Last Modified: 08/25/2015 Completion Status: Completed

1. 1. What is your current position?

#	Answer	Bar	Response	%
1	Undergraduate Student		0	0%
2	Graduate Student		5	71%
3	Developer		0	0%
4	Faculty		1	14%
5	Other		1	14%
	Total		7	

Other New Graduate

Statistic	Value
Min Value	2
Max Value	5
Mean	2.71
Variance	1.57
Standard Deviation	1.25
Total Responses	7

2. 2. Do you have industry working experience?

#	Answer	Bar	Response	%
1	Yes		3	43%
2	No		4	57%
	Total		7	

Statistic	Value
Min Value	1
Max Value	2
Mean	1.57
Variance	0.29
Standard Deviation	0.53
Total Responses	7

3. 3. What is your year of experience on Java programming?

#	Answer	Bar	Response	%
1	Less than a year		0	0%
2	1 - 2 years		3	43%
3	2 - 5 years		2	29%
4	more than 5 years		2	29%
	Total		7	

Statistic	Value
Min Value	2
Max Value	4
Mean	2.86
Variance	0.81
Standard Deviation	0.90
Total Responses	7

 ${\bf 4.} \quad {\tt Q1.1 \ Please \ write \ a \ database \ related \ summary \ for \ the \ method \ insert (int, String) \ in \ Class \ org.agnitas.dao.impl.BlacklistDaoImpl$

Text Response

The method adds a record in "cust_ban_tbl" with customer's ID and email address. The constraint is that ID and email address must not be present in the database (primary key)

insert values into tables, returns true on successful attempt, false otherwise.

Skip - time out

Inserts a company id and associated email into cust_ban_tbl. Ensures that the email is SQL safe.

Insert a new email for an existing company in the table cust_ban_tbl. The email cannot not be blank.

This method saves the company identification and email into the cut-ban-tbl table on the database. Developers should consider that the email string must be in lowercase.

Creating a new entry into the customer table using the company id and customer email. The method will return false if the email id is blank or if the number of total update is not equal to one.

Statistic	Value
Total Responses	7

5. Q1.2 Please write a database related summary for the method createTemporaryTable(int, int, String, int, String) in Class org.agnitas.dao.impl.lmportRecipientsDaoImpl

Text Response

Creates a temporary table with the following fields: - validator_result (mediumblob) - temporary_id (varchar) - status_type (int)

create a temporary table and then destroy the temporary database connections

Skip - time out

Creates a view of the column_duplicate_check table as a "temporary table" for either MySQL or Oracle databases.

The sql statements executed by this method depends on the type of DBMS. If the DBMS is MySQL, a temporary table is created. The name of the table is cromposed by the adminID and the datasourceID that are both input parametersof the method. Specifically, the name of the table is "cust_" + adminID + "_tmp_" + datasource_id + "_tbl" First, the table is created with just one column, namely "column_duplicate_check". Note that even if the table is created starting from a SELECT, no rows are selecteddue to the predicate "1=0" in the WHERE clause that is always false. Thus, the table is empty after creation. After that the structure of the table is altered adding four new columns: recipient, validator_result, temporary_id, and status_type. In addition, an index is created onthe column column_duplicate_check. Finally, another alter table is executed in order to change the default collation of the table to utf8_unicode_ci. If the DBMS is Oracle, some of the above operations are performed separately. The table is created using the CREATE TABLE statement. Thus, in this case thetable is temporary but permanent. Note that a todo was left in the code in order to remind the developer that such tables need to be deleted. Than, an alter table is executed in order to add the above four columns. After than, an index is created on the field column_duplicate_check. Finally, information about the creation of the temporary table is stored in a dedicated table "IMPORT_TMP_TABLES". Here the session_id and the name of the temporary table are stored. Probably, this was done to maintaining information on temporary tables that need to be removed when they are not necessary anymore.

This method creates a single connection to the database and delegates other method to save the temporary connection in the class model.

Creating a temporary table (if does not exists) with the given table name and as the primary key of keyColumn, which comes from the table customer_companyld -- depending on the type of the database whether it is MySQL or Oracle. Add columns in the table. And, then create entries temporary table.

Statistic	Value
Total Responses	7

6. Q1.3 Please write a database related summary for the method log(int, String, HttpServletRequest, ApplicationContext) in Class org.agnitas.util.Logger

Text Response

Inserts into table "EMM_LOG_TBL" with data to log. Specifically, it gets the company ID and the remote IP address from the servlet request and the admin's ID, the category and a message from the parameters.

insert values in log tables

Skip - time out

Inserts a logging message with associated information

Skip - time out - I spent 29 minutes for the two above methods; 3 mins for the first and 26 minutes for the second one.

This method stores into the database the log and use an external method to verify if the environment is using mysql.

Creating entries in the table EMM_LOG_TBL. And, again if it is a MySQL table make entries into the table log_tbl in the columns company_id, admin_id, category, ip_adr, and message.

Statistic	Value
Total Responses	7

 $\label{eq:total_continuity} \textbf{7.} \quad \text{Q1.4 Please write a database related summary for the method getClickStattInfo(int, int, int) in \\ \text{Class org.agnitas.ecs.backend.dao.impl.EmbeddedClickStatDaoImpl}.$

Text Response

Performs a join between RDIR_URL_TBL and rdir_log_tbl, grouping data by RDIR_URL_TBL.full_url, RDIR_URL_TBL.shortname and RDIR_URL_TBL.url_id.

Skip - time out

Skip - time out

Retrieves click-related information about a company's tracked URLs

Skip - time out

Skip - time out

Joining urltbl and logtbl tables and then reading the entries from the newly joined table.

Statistic	Value
Total Responses	7

 $8. \quad \text{Q1.5 Please write a database related summary for the method updateMailinglists(List, int, int, int, Map, JdbcTemplate, String, List) in Class org.agnitas.dao.impl.ImportRecipientsDaoImpl$

Text Response

Removes records with a given "mailinglistid" from a temporary table (namely "cust_#(companyID)_exist1_tmp#(datasourceId)_tbl") and inserts a new record in "customer_\$(companyID)_binding_tbl" for each record in the temporary table.

update mailing list tables, insert details of new customers and delete the non-existing customer details.

Skip - time out

Inserts customer mailing list subscriptions when the operating mode is to add or update the entry

Skip - time out

Skip - time out

Skip - time out

Statistic	Value
Total Responses	7

 $9. \quad \text{Q1.6 Please write a database related summary for the} \\ \text{method trackSuccessfulLogin(String, String) in} \\ \text{Class org.agnitas.dao.impl.LoginTrackDaoImpl} \\$

Text Response

Inserts a new record in "login_track_tbl" with the given parameters as values (namely IP address, login status and username).

calls another method to track and maintain login status details of customers

Skip - time out

Calls method to insert tracking information into database

Skip - time out

Skip - time out

Skip - time out

Statistic	Value
Total Responses	7

$10. \ \ \, \text{Q1. Only focusing on the content of the description without considering the way it has been presented, do you think the message is complete?}$

#	Answer Bar	Response	%
1	The description does not miss any important information.	6	86%
2	The description misses some important information to understand the database-related operations	1	14%
3	The description misses the majority of the important information to understand the database-related operations	0	0%
	Total	7	

Statistic	Value
Min Value	1
Max Value	2
Mean	1.14
Variance	0.14
Standard Deviation	0.38
Total Responses	7

$11. \quad \text{Q2. Only focusing on the content of the description without considering the way it has been presented, do you think the message is concise?}$

#	# Answer Bar	Response	%
1	1 The description contains no redundant/useless information.	6	86%
2	The description contains some redundant/useless information.	0	0%
3	The description contains a lot of redundant/useless information.	1	14%
	Total	7	

Statistic	Value
Min Value	1
Max Value	3
Mean	1.29
Variance	0.57
Standard Deviation	0.76
Total Responses	7

$12. \quad \hbox{Q3. Only focusing on the content of the description without considering the completeness and conciseness, do you think the description is expressive?}$

#	Answer	Bar	Response	%
1	The description is easy to read and understand.		7	100%
2	The description is somewhat readable and understandable.		0	0%
3	The description is hard to read and understand.		0	0%
	Total		7	

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

 ${\bf 13.} \quad {\tt Q4: Please \ provide \ the \ rationale \ for \ your \ answers \ to \ {\tt Q3. \ (Open \ question)}}$

Text Response

It's very clear, readable and it doesn't miss anything.

Good and concise

Missed that it santizes the email string. The method itself does not check any of the given constraints. It seems that is all handled elsewhere.

The description is simply perfect. I missed several constraints. Such constraints are easy to identify looking at the DB schema. However, they could be easily missed if you look at only the code.

The related description describes adequately the function of the method, It provides complete information about what should be considered when calling the method.

It is more complete, concise, and expressive than my answer.

Statistic	Value
Total Responses	6

$\textbf{14.} \quad \textbf{Q1.} \ \textbf{Only focusing on the content of the description without considering the way it has been presented, do you think the message is complete?}$

#	Answer Bar	Response	%
1	The description does not miss any important information.	2	29%
2	The description misses some important information to understand the database-related operations	2	29%
3	The description misses the majority of the important information to understand the database-related operations	3	43%
	Total	7	

Statistic	Value
Min Value	1
Max Value	3
Mean	2.14
Variance	0.81
Standard Deviation	0.90
Total Responses	7

$15. \quad \hbox{Q2. Only focusing on the content of the description without considering the way it has been presented, do you think the message is concise?}$

#	Answer	Bar	Response	%
1	The description contains no redundant/useless information.		7	100%
2	The description contains some redundant/useless information.		0	0%
3	The description contains a lot of redundant/useless information.		0	0%
	Total		7	

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

$16. \quad \hbox{Q3. Only focusing on the content of the description without considering the completeness and conciseness, do you think the description is expressive?}$

#	Answer	Bar	Response	%
1	The description is easy to read and understand.		7	100%
2	The description is somewhat readable and understandable.		0	0%
3	The description is hard to read and understand.		0	0%
	Total		7	

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

 $17. \quad \mbox{Q4: Please}$ provide the rationale for your answers to Q1 to Q3. (Open question)

Text Response

Though it is easy to understand, it misses a lot of information (for example, what fields are added to the temporary table)

Could have provided a little more details

Misses all the "NOT NULL" constraints

I specified that some important operations are missed since the description of the method completely ignore the fact that the operations made by the method depends on the type of the DBMS. For instance the INSERT statement is executed only on Oracle DBMS and not on MySQL DBMS. In addition, CREATE and ALTER TABLE statements are missed. In my opinion they should be considered because from the analysis of such statements important information can be derived.

I think it provides a complete description.

It only describes the insertion operation in brief but does not discuss the model constraints.

Statistic	Value
Total Responses	6

$18. \ \ \, \text{Q1. Only focusing on the content of the description without considering the way it has been presented, do you think the message is complete?}$

#	Answer Bar	Response	%
1	The description does not miss any important information.	5	71%
2	The description misses some important information to understand the database-related operations	2	29%
3	The description misses the majority of the important information to understand the database-related operations	0	0%
	Total	7	

Statistic	Value
Min Value	1
Max Value	2
Mean	1.29
Variance	0.24
Standard Deviation	0.49
Total Responses	7

$19. \ \ \, \text{Q2. Only focusing on the content of the description without considering the way it has been presented, do you think the message is concise?}$

#	Answer	Bar	Response	%
1	The description contains no redundant/useless information.		7	100%
2	The description contains some redundant/useless information.		0	0%
3	The description contains a lot of redundant/useless information.		0	0%
	Total		7	

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

$20. \ \ \, \text{Q3. Only focusing on the content of the description without considering the completeness and conciseness, do you think the description is expressive?}$

#	Answer	Bar	Response	%
1	The description is easy to read and understand.		7	100%
2	The description is somewhat readable and understandable.		0	0%
3	The description is hard to read and understand.		0	0%
	Total		7	

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

Text Response

 $\label{thm:condition} \mbox{Everything ok, no redundant information, all the necessary information correctly provided.}$

Perfect

Once again the description missed the fact that some operations are DBMS dependent. For instance, if the DBMS is MYSQL than the info are stored in the table LOG_TBL. Otherwise, they are stored in the table EMM_LOG_TBL.

I think that not is complete because the it is missing the case where the data is stored in the EMM_LOG_TBL table.

I missed the model constraints to specify in the description.

Statistic	Value
Total Responses	5

${\bf 22.}\ \ \, {\tt Q1.\,Only\,focusing\,on\,the\,content\,of\,the\,description\,without\,considering\,the}\\ {\tt way\,it\,has\,been\,presented,\,do\,you\,think\,the\,message\,is\,complete?}$

#	Answer Bar	Response	%
1	The description does not miss any important information.	1	14%
2	The description misses some important information to understand the database-related operations	6	86%
3	The description misses the majority of the important information to understand the database-related operations	0	0%
	Total	7	

Statistic	Value
Min Value	1
Max Value	2
Mean	1.86
Variance	0.14
Standard Deviation	0.38
Total Responses	7

${\bf 23.} \ \ \, {\tt Q2.} \ \, {\tt Only} \ \, {\tt focusing} \ \, {\tt on the content} \ \, {\tt of the description} \ \, {\tt without considering} \ \, {\tt the way} \ \, {\tt it has been presented}, \ \, {\tt do you think} \ \, {\tt the message} \ \, {\tt is concise?}$

#	Answer	Bar	Response	%
1	The description contains no redundant/useless information.		7	100%
2	The description contains some redundant/useless information.		0	0%
3	The description contains a lot of redundant/useless information.		0	0%
	Total		7	

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

${\bf 24.}\ \ {\tt Q3.}\ {\tt Only}\ {\tt focusing}\ {\tt on}\ {\tt the}\ {\tt content}\ {\tt of}\ {\tt the}\ {\tt description}\ {\tt without}\ {\tt considering}\ {\tt the}\ {\tt completeness}\ {\tt and}\ {\tt conciseness},\ {\tt do}\ {\tt you}\ {\tt think}\ {\tt the}\ {\tt description}\ {\tt is}\ {\tt expressive}?$

#	Answer	Bar	Response	%
1	The description is easy to read and understand.		3	43%
2	The description is somewhat readable and understandable.		3	43%
3	The description is hard to read and understand.		1	14%
	Total		7	

Statistic	Value
Min Value	1
Max Value	3
Mean	1.71
Variance	0.57
Standard Deviation	0.76
Total Responses	7

Text Response

It should be specified that RDIRURLTABLENAMEDATABASESPECIFIC and RDIRLOGTABLENAMEDATABASESPECIFIC are variable names which contain table names, and not table names. Besides, upper case obviously doesn't help. It could be specified that there is a "group by" operation.

Could have provided a little more in detail

I would like to see here also the information extracted (i.e., columns), not just the table name where the query has been performed.

I think that there are other data base operations the could be missed in here.

I missed the callee information. But the description presented itself is not so clear to read.

Statistic	Value
Total Responses	5

${\bf 26.}\ \ \, {\tt Q1.\,Only\,focusing\,on\,the\,content\,of\,the\,description\,without\,considering\,the}\\ {\tt way\,it\,has\,been\,presented,\,do\,you\,think\,the\,message\,is\,complete?}$

#	Answer Bar	Response	%
1	The description does not miss any important information.	3	43%
2	The description misses some important information to understand the database-related operations	3	43%
3	The description misses the majority of the important information to understand the database-related operations	1	14%
	Total	7	

Statistic	Value
Min Value	1
Max Value	3
Mean	1.71
Variance	0.57
Standard Deviation	0.76
Total Responses	7

$27.\;$ Q2. Only focusing on the content of the description without considering the way it has been presented, do you think the message is concise?

#	Answer	Bar	Response	%
1	The description contains no redundant/useless information.		4	57%
2	The description contains some redundant/useless information.		2	29%
3	The description contains a lot of redundant/useless information.		1	14%
	Total		7	

Statistic	Value
Min Value	1
Max Value	3
Mean	1.57
Variance	0.62
Standard Deviation	0.79
Total Responses	7

$\textbf{28.} \ \ \, \textbf{Q3.} \textbf{Only focusing on the content of the description without considering the completeness and conciseness, do you think the description is expressive?}$

#	Answer	Bar	Response	%
1	The description is easy to read and understand.		6	86%
2	The description is somewhat readable and understandable.		1	14%
3	The description is hard to read and understand.		0	0%
	Total		7	

Statistic	Value
Min Value	1
Max Value	2
Mean	1.14
Variance	0.14
Standard Deviation	0.38
Total Responses	7

Text Response

It says the same thing twice, missing the "delete" and "insert" operations performed in the actual method, not via delegation.

Q1: There should be an insertion of info into the table customer_ too Q2: In my opinion there's already a description about dropping the table cust_ via the call removeBindTemporalyTable, so the description about dropping the table cust_ via the chaincall which involves the previous call is uneccessary

Totally mis-labels the tables but also they aren't being dropped at all? I see entries being deleted and inserted, no dropping.

The INSERT statement is completely missed in the description. In addition, an explanation on when the method drops the TABLE CUST_via a call and when it drops the same table via the chain-calls could be worthwhile.

It provides a complete description.

Statistic	Value
Total Responses	5

$30.\,$ Q1. Only focusing on the content of the description without considering the way it has been presented, do you think the message is complete?

#	Answer Bar	Response	%
1	The description does not miss any important information.	7	100%
2	The description misses some important information to understand the database-related operations	0	0%
3	The description misses the majority of the important information to understand the database-related operations	0	0%
	Total	7	

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

${\bf 31.}\ \ {\tt Q2.}\ {\tt Only}\ {\tt focusing}\ {\tt on}\ {\tt the}\ {\tt content}\ {\tt of}\ {\tt the}\ {\tt description}\ {\tt without}\ {\tt considering}\ {\tt the}\ {\tt way}\ {\tt it}\ {\tt has}\ {\tt been}\ {\tt presented},\ {\tt do}\ {\tt you}\ {\tt think}\ {\tt the}\ {\tt message}\ {\tt is}\ {\tt concise}?$

#	Answer	Bar	Response	%
1	The description contains no redundant/useless information.		7	100%
2	The description contains some redundant/useless information.		0	0%
3	The description contains a lot of redundant/useless information.		0	0%
	Total		7	

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

${\bf 32.}\ \ \, {\tt Q3.}\ \, {\tt Only}\ \, {\tt focusing}\ \, {\tt on}\ \, {\tt the}\ \, {\tt content}\ \, {\tt of}\ \, {\tt the}\ \, {\tt description}\ \, {\tt without}\ \, {\tt considering}\ \, {\tt the}\ \, {\tt completeness}\ \, {\tt and}\ \, {\tt conciseness},\ \, {\tt do}\ \, {\tt you}\ \, {\tt think}\ \, {\tt the}\ \, {\tt description}\ \, {\tt is}\ \, {\tt expressive}?$

#	Answer	Bar	Response	%
1	The description is easy to read and understand.		7	100%
2	The description is somewhat readable and understandable.		0	0%
3	The description is hard to read and understand.		0	0%
	Total		7	

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

$\textbf{33.} \quad \textbf{Q4: Please provide the rationale for your answers to Q1 to Q3. (Open question)}$

Text Response
Everything ok.
Perfect
Perfect description.
I think it shows the more relevant aspects.

Statistic	Value
Total Responses	4

$34.\;$ General question 1: Is our generated summary useful for understanding the database usages in the system?

#	Answer	Bar	Response	%
1	Yes. It's useful. Why?		7	100%
2	No. It's not useful. Why?		0	0%
	Total		7	

Yes. It's useful. Why?	No. It's not useful. Why?
The constraint part is particularly useful, as it's not necessary to find all the constraints manually in the model	-
To understand the code related to database queries	-
It helps me understand which part of the database is being used for each method	-
Describes constraints not explicitly made	-
Because it provides a bird-eye view of the operations performed	-
It simplifies the study of the database operations and delegations in the source code, and describe the methods in a simple and understandable way.	-
It clearly includes the description and the model constraints where applicable.	-

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

 $\textbf{35.} \ \ \text{General question 2: What software engineering tasks would you use this type of summary for? (Open question)}$

Text Response

Debugging (some errors can depend on violated constraints), evolution (it could help to reduce the bugs introduced related to database operations).

Code comprehension

Documentation of the API

 $Of course \ program \ comprehension. \ But \ I \ think \ that \ such \ information \ is \ particularly \ useful \ for \ impact \ analysis.$

Refactoring, Bug tracking and code traceability.

software documentation mostly and program comprehension in particular.

Statistic	Value
Total Responses	6