Exam3

Graded

Student

Asrar Syed

Total Points

92 / 100 pts

Question 1

MS:1-5 — **16** / 20 pts

– **0 pts** Correct

✔ – **4 pts** Click here to replace this description.

– **8 pts** Click here to replace this description.

Correct Answer:
In all cases the program has correct behaviour
Well Documented
Can be modified and maintained easily
Strong cohesion in all levels
Weak Coupling between objects, components

Question 2

MC6 — **4** / 4 pts

✔ – **0 pts** Correct

– **4 pts** Click here to replace this description.

Question 3

MC7 — **4** / 4 pts

✔ – **0 pts** Correct

– **4 pts** Click here to replace this description.

Question 4

MC8 — **0** / 4 pts

– **0 pts** Correct

✔ – **4 pts** Click here to replace this description.

Correct Answer: D

Question 5

MC9 — **4** / 4 pts

✔ – **0 pts** Correct

– **4 pts** Click here to replace this description.

Question 6

MS:10-11 **8** / 8 pts

✔ **– 0 pts** Correct

– 8 pts Click here to replace this description.

– 4 pts Click here to replace this description.

Question 7

MC12 **4** / 4 pts

✔ **– 0 pts** Correct

– 4 pts Click here to replace this description.

Question 8

MC13 **4** / 4 pts

✔ **– 0 pts** Correct

– 4 pts Click here to replace this description.

Question 9

MC14 **4** / 4 pts

✔ **– 0 pts** Correct

– 4 pts Click here to replace this description.

Question 10

MC15 **4** / 4 pts

✔ **– 0 pts** Correct

– 4 pts Click here to replace this description.

Question 11

MC16 **4** / 4 pts

✔ **– 0 pts** Correct

– 4 pts Click here to replace this description.

Question 12

MC17 **4** / 4 pts

✔ **– 0 pts** Correct

– 4 pts Click here to replace this description.

Question 13

MC18 **4** / 4 pts

✔ **– 0 pts** Correct

Question 14

WR19 **4** / 4 pts

✔ **– 0 pts** Correct

– 1 pt Click here to replace this description.

– 2 pts Click here to replace this description.

Question 15

WR20 **24** / 24 pts

15.1 **WR20SQL1** **12** / 12 pts

✔ **– 0 pts** Correct

– 3 pts Click here to replace this description.

– 4 pts Click here to replace this description.

– 2 pts Click here to replace this description.

– 1 pt Click here to replace this description.

– 6 pts Click here to replace this description.

15.2 **WR20SQL2** **12** / 12 pts

✔ **– 0 pts** Correct

– 12 pts Click here to replace this description.

– 4 pts Click here to replace this description.

– 8 pts Click here to replace this description.

– 1 pt Click here to replace this description.

– 6 pts Click here to replace this description.

– 3 pts You are setting the creditlimit, not the country, but very close

– 2 pts Click here to replace this description.

NAME (in all caps): ASRAR SYED

GSU Panther ID: 002679083

Each multiple-choice answer or multi-select answer is valued at 4pts. (**72pts**) Write the capital letter (A, B, C, D) in the blank beside the question number in multiple-choice. ***Circled answers only will not be graded***, i.e., zero points if nothing is written in blank beside a question number. In multi-select (MS), place an '**X**' beside your choices. **Do not give lightly marked choices to confuse the grader**. Wrongly marked choices will be given negative points.

1-5: MS. Choose **5** characteristics of high-quality programming code. (Mark a dark, clear '**X**' for choices)

_____ Architected in a complex way
__X__ In all cases, the program has correct behavior
_____ Removes documentation for speed of execution
__X__ Well documented
_____ Risk-averse
__X__ Can be modified and maintained easily
__X__ Strong cohesion in all levels
_____ No need for good naming conventions
__X__ Strong coupling between objects, components
_____ Weak coupling between objects, components

__D__ 6. Managing complexity has _____ role in software construction.
A) unlimited and low priority
B) globally ignored
C) decentralized
(D) centralized

__A__ 7. The 'package' in programming code is:
(A) essentially a way to group source code files (classes and interfaces)
B) essentially a way to scramble source code files to thwart reverse engineering
C) enabling open access control
D) required for any OOP language for execution

__A__ 8. One purpose of a 'package' in programming code is:
(A) restrict distribution of code files
B) give the programmer a simple tool to compile their code files
C) to remove access controls for file access
D) to prevent naming conflicts for code files with same name in different packages

__B__ 9. The 'On-line Transactional Processing' database is this type:
A) analytical
(B) operational
C) object-oriented
D) procedural

10-11: MS. Choose **2** general types of databases by function. (Mark a dark, clear '**X**' for choices)

_____ Architectural
__X__ Analytical
__X__ Operational
_____ Secondary
_____ NoSQL
_____ Object oriented
_____ Primary

B 12. The 'DROP' for a table in SQL does this:
A) deletes only the table's data
B) deletes the table's data and removes the structure
C) removes the table's structure and archives the data contained within
D) archives the table's data and structure in case you need to restore it

A 13. The 'TRUNCATE' for a table in SQL does this:
A) deletes only the table's data
B) deletes the table's data and removes the structure
C) removes the table's structure and archives the data contained within
D) archives the table's data and structure in case you need to restore it

C 14. A collection of concepts for describing data is:
A) a dynamic set of UML diagrams
B) a schema
C) a data model
D) stored in an encrypted file separate from the data

D 15. The SQL keyword to add data to a database is:
A) UPDATE
B) APPEND
C) CREATE
D) INSERT

D 16. The SQL injection attack is:
A) a unique way to execute reviewed and secure code
B) the process of adding a database to your software system
C) an anti-virus software tool to protect your database
D) a hacking method for executing malicious commands to your database

D 17. The Data Definition Language of SQL allows:
A) database tables to be created or updated
B) indexes to be created
C) impose constraints between tables
D) all the above

B 18. GitHub is:
A) a delivery service for things you order
B) a storage system for version control
C) an automobile part for the wheels/suspension
D) the use of unpleasant insults

19. Why should computer science students study databases? (Complete sentences only. **4pts**)

Computer science students should study databases because it allows us to design, create and manage all the data within a system. This is because we collect and store vast amounts of data and need a method to structure data. We can then, for example, interact with the database in a relational way and try to find connections between collected data.

19.1-19.2. Given a table named **'customers'** has this subset of data: Study this data very carefully. NEATLY write your SQL query ONLY INSIDE the 'Answer' box. Analyze each record set below and give an optimal **SQL UPDATE** statement to produce this new ***record set*** of data. Assume data changes carry on to the next query. Incorrect syntax is okay as grading will depend on the parts of the SQL statement and proper order of the parts. **(12 pts each query)**

ORIGINAL DATA IN TABLE

	customerNumber	customerName	city	country	creditLimit
1	145	Danish Wholesale Imports	Kobenhavn	Denmark	83,400
2	186	Toys of Finland, Co.	Helsinki	Finland	96,500
3	227	Heintze Collectables	Århus	Denmark	120,800
4	249	Amica Models & Co.	Torino	Italy	113,000
5	278	Rovelli Gifts	Bergamo	Italy	119,600
6	293	BG&E Collectables	Fribourg	Switzerland	0
7	298	Vida Sport, Ltd	Genève	Switzerland	141,300
8	311	Oulu Toy Supplies, Inc.	Oulu	Finland	90,500
9	334	Suominen Souveniers	Espoo	Finland	98,800
10	376	Precious Collectables	Bern	Switzerland	0
11	386	L'ordine Souveniers	Reggio Emilia	Italy	121,400
12	473	Frau da Collezione	Milan	Italy	34,800

RECORD SET 1

	customerNumber	customerName	city	country	creditLimit
1	145	Danish Wholesale Imports	Kobenhavn	Denmark	83,400
2	186	Toys of Finland, Co.	Helsinki	Finland	96,500
3	227	Heintze Collectables	Århus	Denmark	120,800
4	249	Amica Models & Co.	Torino	Italy	113,000
5	278	Rovelli Gifts	Bergamo	Italy	119,600
6	293	BG&E Collectables	Fribourg	Switzerland	100,000
7	298	Vida Sport, Ltd	Genève	Switzerland	241,300
8	311	Oulu Toy Supplies, Inc.	Oulu	Finland	90,500
9	334	Suominen Souveniers	Espoo	Finland	98,800
10	376	Precious Collectables	Bern	Switzerland	100,000
11	386	L'ordine Souveniers	Reggio Emilia	Italy	121,400
12	473	Frau da Collezione	Milan	Italy	34,800

Query 1:

```
update Customers
set creditLimit = creditLimit + 100,000
where customerNumber IN(293,298,376) AND
country = Switzerland
```

(New Starting data from Query #1 above.)

	customerNumber	customerName	city	country	creditLimit
1	145	Danish Wholesale Imports	Kobenhavn	Denmark	83,400
2	186	Toys of Finland, Co.	Helsinki	Finland	96,500
3	227	Heintze Collectables	Århus	Denmark	120,800
4	249	Amica Models & Co.	Torino	Italy	113,000
5	278	Rovelli Gifts	Bergamo	Italy	119,600
6	293	BG&E Collectables	Fribourg	Switzerland	100,000
7	298	Vida Sport, Ltd	Genève	Switzerland	241,300
8	311	Oulu Toy Supplies, Inc.	Oulu	Finland	90,500
9	334	Suominen Souveniers	Espoo	Finland	98,800
10	376	Precious Collectables	Bern	Switzerland	100,000
11	386	L'ordine Souveniers	Reggio Emilia	Italy	121,400
12	473	Frau da Collezione	Milan	Italy	34,800

RECORD SET 2

	customerNumber	customerName	city	country	creditLimit
1	145	Danish Wholesale Imports	Kobenhavn	Denmark	83,400
2	186	Toys of Finland, Co.	Helsinki	Finland	96,500
3	227	Heintze Collectables	Århus	Denmark	120,800
4	249	Amica Models & Co.	Torino	Italy	83,000
5	278	Rovelli Gifts	Bergamo	Italy	89,600
6	293	BG&E Collectables	Fribourg	Switzerland	100,000
7	298	Vida Sport, Ltd	Genève	Switzerland	241,300
8	311	Oulu Toy Supplies, Inc.	Oulu	Finland	90,500
9	334	Suominen Souveniers	Espoo	Finland	98,800
10	376	Precious Collectables	Bern	Switzerland	100,000
11	386	L'ordine Souveniers	Reggio Emilia	Italy	91,400
12	473	Frau da Collezione	Milan	Italy	4,800

Query 2:

```
UPDATE Customers
  Set creditLimit = creditLimit - 30,000
  Where customerNumber IN (249,278,386,473)
  AND country = Italy
```