**CS 457 – Data modeling and Implementation techniques (Lab) Venue:**

**Time Duration: 2.35 pm tp**

**Date: Sep. 26, 2019**

**Instructions: Open book, Open notes**

**Quiz 1: [Max: 50 points]**

1. [6 points] Create and display the following table. Let the name of the table be **products\_tbl**

Table 1: products\_tbl

PROD\_ID PROD\_DESC COST

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11235 WITCH COSTUME 29.99

222 PLASTIC PUMPKIN 18 INCH 7.75

13 FALSE PARAFFIN TEETH 1.1

90 LIGHTED LANTERNS 14.5

15 ASSORTED COSTUMES 10

9 CANDY CORN 1.35

6 PUMPKIN CANDY 1.45

87 PLASTIC SPIDERS 1.05

119 ASSORTED MASKS 4.95

1. [10 points] Refer to Table 1. Write the statements which can provide the
2. average cost of all the products
3. count the number of items whose cost is greater than one and less than two
4. Count the number of items whose cost is either between 10 and 15 (both inclusive) or between 3 and 8 (both inclusive).
5. Count the number of items whose cost is either less than 5 or greater than 10.
6. Maximum cost of all the products.
7. Minimum cost of all the products.
8. Sum cost of all the products.
9. Nearest integer to the cost provided on the 3rd column.
10. Truncate the value in the 3rd column.
11. Find product IDs which are either 5 digits long or 3 digits long.
12. [4 points] Add a fourth column on Table 1 and name it as STORES. Under this column, you can have the following list of entries stored.

PARTY CITY

TOYS R US

WALGREENS

WALMART

COSTCO

SAFEWAY

TRADER JOE’S

DOLLAR TREE

TARGET

1. [6 points] Refer to Table 1 including the fourth column as shown in Q3. Find out which of these stores have
2. Names beginning with ‘W’
3. Names beginning with ‘T’
4. Vowel ‘O’ in them
5. Their store names having more than 10 characters long (include the space characters)
6. Names containing the character ‘Y’
7. Names containing the string ‘AL’
8. [16 points] Rewrite the following SQL code (by finding out possible errors) to obtain the table that it will specify with the data which is given:

CREATE TABLE emp (

empno INT PRIMARY KEY,

ename VARCHAR(10),

job VARCHAR(9),

mgr INT NULL,

hiredate DATETIME,

sal NUMERIC(7,2),

comm NUMERIC(7,2) NULL,

dept INT)

begin

insert into emp values

    (1,'JOHNSON','ADMIN',6,'12-17-1990',18000,NULL,4)

insert into emp values

    (2,'HARDING','MANAGER',9,'02-02-1998',52000,300,3)

insert into emp values

    (3,'TAFT','SALES I',2,'01-02-1996',25000,500,3)

insert into emp values

    (4,'HOOVER','SALES I',2,'04-02-1990',27000,NULL,3)

insert into emp values

    (5,'LINCOLN','TECH',6,'06-23-1994',22500,1400,4)

insert into emp values

    (6,'GARFIELD','MANAGER',9,'05-01-1993',54000,NULL,4)

insert into emp values

    (7,'POLK','TECH',6,'09-22-1997',25000,NULL,4)

insert into emp values

    (8,'GRANT','ENGINEER',10,'03-30-1997',32000,NULL,2)

insert into emp values

    (9,'JACKSON','CEO',NULL,'01-01-1990',75000,NULL,4)

insert into emp values

    (10,'FILLMORE','MANAGER',9,'08-09-1994',56000,NULL,2)

insert into emp values

    (11,'ADAMS','ENGINEER',10,'03-15-1996',34000,NULL,2)

insert into emp values

    (12,'WASHINGTON','ADMIN',6,'04-16-1998',18000,NULL,4)

insert into emp values

    (13,'MONROE','ENGINEER',10,'12-03-2000',30000,NULL,2)

insert into emp values

    (14,'ROOSEVELT','CPA',9,'10-12-1995',35000,NULL,1)

End

1. [8 points] Rewrite the following SQL code (by finding out possible errors) to obtain the table that it will specify with the data which is given:

CREATE TABLE dept (

deptno INT NOT NULL,

dname VARCHAR(14),

loc VARCHAR(13))

begin

insert into dept values (1,'ACCOUNTING','ST LOUIS')

insert into dept values (2,'RESEARCH','NEW YORK')

insert into dept values (3,'SALES','ATLANTA')

insert into dept values (4, 'OPERATIONS','SEATTLE')

end