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Department Of Information Technology IT38513
(Database Management System)
Lab Assignment : V

```
CREATE DATABASE IT15_AMANLATYA;
USE IT15_AMANLATYA;

CREATE TABLE Warehouses (
    Code INT PRIMARY KEY NOT NULL,
    Location VARCHAR(255) NOT NULL,
    Capacity INT NOT NULL
);

-- Create the Boxes table
CREATE TABLE Boxes (
    Code VARCHAR(255) PRIMARY KEY NOT NULL,
    Contents VARCHAR(255) NOT NULL,
    Value DECIMAL(10, 2) NOT NULL,
    Warehouse INT NOT NULL,
    FOREIGN KEY (Warehouse) REFERENCES Warehouses(Code)
);
```

1. Select all warehouses.

ANS:

Result Grid | Filter Rows:

Code	Location	Capacity
1	Chicago	3
2	Chicago	4
3	New York	7
4	Los Angeles	2
5	San Francisco	8

2. Select all boxes with a value larger than $150.

ANS:

Code	Contents	Value	Warehouse
0MN7	Rocks	180.00	3
4H8P	Rocks	250.00	1
4RT3	Scissors	190.00	4
7G3H	Rocks	200.00	1
9J6F	Papers	175.00	2
NULL	NULL	NULL	NULL

3. Select all distinct content in all the boxes.

ANS:

Contents
Rocks
Scissors
Papers

4. Select the average value of all boxes

ANS :

AverageValue
147.727273

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5. Select the warehouse code and average value of the boxes in each warehouse.
ANS:

Warehouse	AverageValue
1	162.500000
2	162.500000
3	115.000000
4	165.000000
5	90.000000

6. Same as previous excercise, but select only those warehouses where the average value of the boxes is greater than $150.
ANS:

Warehouse	AverageValue
1	162.500000
2	162.500000
4	165.000000

7. Select the code of each box, along with the name of the city the box is located in.
ANS:

Code	Location
4H8P	Chicago
7G3H	Chicago
8JN6	Chicago
P0H6	Chicago
9J6F	Chicago
P2T6	Chicago
0MN7	New York
8Y6U	New York
4RT3	Los Angeles
LL08	Los Angeles
TU55	San Francisco

8. Select the warehouse codes, alongwith the number of boxes in each warehouse. Optionally, take into account that some warehouses are empty (i.e., the box count should show up as zero, instead of omitting the warehouse from the result).
ANS:

Code	BoxCount
1	4
2	2
3	2
4	2
5	1

9. Select the codes of all warehouses that are saturated (a warehouse is saturated if the number of boxes in it is larger than the warehouse's capacity).
ANS:

Code
1

10. Select the codes of all boxes located in chicago.
ANS:

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	Code
▶	4H8P
	7G3H
	8JN6
	P0H6
	9J6F
	P2T6

11. Create a new warehouse in New York with a capacity of 3 Boxes.

ANS:

```
25  14:03:30  INSERT INTO Warehouses (Code, Location, Capacity) VALUES (6, 'New York', 3)   1 row(s) affected
```

13. Create a new box with code “H5RT”, containing “papers” with a value of $200, and located in warehouse 2.

ANS:

```
37  14:07:02  INSERT INTO Boxes (Code, Contents, Value, Warehouse) VALUES ('H5RT', 'Papers', 200, 2)   1 row(s) affected
```

14. Apply a 20% value reduction to boxes with a value larger than the average value of all boxes.

ANS:

```
41  14:10:53  SET @avg_value = (SELECT AVG(Value) FROM Boxes)   0 row(s) affected
```

15. Remove all boxes with a value lower than $100.

ANS:

```
40  14:08:48  DELETE FROM Boxes WHERE Warehouse IN (  SELECT Warehouses.Code  FROM Warehous...  4 row(s) affected
```

16. Remove all boxes from saturated warehouse.

ANS:

```
40  14:08:48  DELETE FROM Boxes WHERE Warehouse IN (  SELECT Warehouses.Code  FROM Warehous...  4 row(s) affected
```