



Greenfields Public School

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HOLIDAY HOMEWORK ASSIGNMENT

SUBJECT: Computer Science

GRADE: XII

S.NO.	QUESTIONS						
1.	In a table 'Employee', a column 'Occupation' contains many duplicate values. Which keyword would you use if you wish to list only different values?						
2.	In a hospital, the patients are allocated to wards. A database named 'Hospital' is created. One table in this database is: WARD with WardId, WardName, NumOfBeds as columns and WardId as the primary key. Write another suitable table you could expect to see in the 'Hospital' database, with 3 suitable columns identifying Primary key and Foreign key in the table that you expect.						
3.	What is the difference between "%" and "_ "wild card character with reference to LIKE clause of MySQL?						
4.	What is the difference between COUNT () and COUNT (*) function?						
5.	Consider the given SQL Query: SELECT department, COUNT(*) FROM employees HAVING COUNT(*) > 5 GROUP BY department; Saanvi is executing the query but not getting the correct output. Write the correction.						
6.	The following query is producing an error. Identify the error and also write the correct query. SELECT * FROM EMP ORDER BY NAME WHERE SALARY >= 5000;						
7.	The Doc_name Column of a table Hospital is given below: <table border="1" style="margin-left: 20px;"> <tr><td>AVINASH</td></tr> <tr><td>HARIHARAN</td></tr> <tr><td>VINAYAK</td></tr> <tr><td>DEEPAK</td></tr> <tr><td>SANJEEV</td></tr> <tr><td>RAJEEV</td></tr> </table> <p>Based on the information, find the output of the following queries: (i) Select doc_name from Hospital where doc_name like "%v"; (ii) Select doc_name from Hospital where doc_name like ":%e%";</p>	AVINASH	HARIHARAN	VINAYAK	DEEPAK	SANJEEV	RAJEEV
AVINASH							
HARIHARAN							
VINAYAK							
DEEPAK							
SANJEEV							
RAJEEV							
8.	Mr. Janak is using a table with following columns: Name, Class, Course_Id, Course_name He needs to display names of students, who have not been assigned any						

	<p>stream or have been assigned Course_name that ends with “economics”.He wrote the following command, which did not give the desired result. SELECT Name, Class FROM Students WHERE Course_name=Null OR Course_name=“%economics”; Help Mr.Janak to run the query by removing the error and write the correct query.</p>																					
9.	<p>There is a column Salary in a Table EMPLOYEE. The following two statements are giving different outputs. What may be the possible reason? SELECT COUNT(*) FROM EMPLOYEE; SELECT COUNT(SALARY) FROM EMPLOYEE;</p>																					
10.	<p>Raj is a database programmer, He has to write the query from EMPLOYEE table to search for the employee who are not getting any commission, for this he has written the query as: SELECT * FROM EMPLOYEE WHERE commission=null; But the query is not producing the correct output, help Raj and correct the query so that he gets the desired output.</p>																					
11.	<p>Ankur is a database programmer, has to write the query from EMPLOYEE table to search for the employee who are working in „Sales“ or „IT“ department, for this he has written the query as: SELECT * FROM EMPLOYEE WHERE department=“Sales“ or „IT“; But the query is not producing the correct output, help Raj and correct the query so that he gets the desired output.</p>																					
12.	<p>Suppose a table BOOK contain columns (BNO, BNAME, AUTHOR, PUBLISHER), Raj is assigned a task to see the list of publishers, when he executed the query as: SELECT PUBLISHER FROM BOOK; He noticed that the same publisher name is repeated in query output. What could be possible solution to get publisher name uniquely? Rewrite the following query to fetch unique publisher names from table.</p>																					
13.	<p>Observe the given Table TEACHER and give the output of question (i) and (ii)</p> <table border="1"> <thead> <tr> <th>TEACHER_CODE</th> <th>TEACHER_NAME</th> <th>DOJ</th> </tr> </thead> <tbody> <tr> <td>T001</td> <td>ANAND</td> <td>2001-01-30</td> </tr> <tr> <td>T002</td> <td>ANKIT</td> <td>2007-09-05</td> </tr> <tr> <td>T003</td> <td>AMIT</td> <td>2007-09-20</td> </tr> <tr> <td>T004</td> <td>BALBIR</td> <td>2010-02-15</td> </tr> <tr> <td>T005</td> <td>JASBIR</td> <td>2011-01-20</td> </tr> <tr> <td>T006</td> <td>KULBIR</td> <td>2008-07-11</td> </tr> </tbody> </table>	TEACHER_CODE	TEACHER_NAME	DOJ	T001	ANAND	2001-01-30	T002	ANKIT	2007-09-05	T003	AMIT	2007-09-20	T004	BALBIR	2010-02-15	T005	JASBIR	2011-01-20	T006	KULBIR	2008-07-11
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1. SELECT TEACHER_NAME, DOJ FROM TEACHER WHERE TEACHER_NAME LIKE „%I%“;
2. SELECT * FROM TEACHER WHERE DOJ LIKE “%-09-%”;

14. Write SQL queries for (i) to (iv) and find outputs for SQL queries (v) to (vi) which are based on tables:

TABLE ACCOUNT

ANO	ANAME	ADDRESS
101	NIRJA SINGH	BANGLORE
102	ROHAN GUPTA	CHENNAI
103	ALI REZA	HYDERABAD
104	RISHABH JAIN	CHENNAI
105	SIMRAN KAUR	CHNDIGARH

TABLE TRANSACT

TRNO	ANO	AMOUNT	TYPE	DOT
T001	101	2500	WITHDRAW	2017-12-21
T002	103	3000	DEPOSIT	2017-06-01
T003	102	2000	WITHDRAW	2017-05-12
T004	103	1000	DEPOSIT	2017-10-22
T005	102	12000	DEPOSIT	2017-11-06

(i) To display details of all transactions of TYPE Withdraw from TRANSACT table

(ii) To display ANO and AMOUNT of all Deposit and Withdrawals done in month of 'May' 2017 from table TRANSACT.

(iii) To display first date of transaction (DOT) from table TRANSACT for Account having ANO as 102

(iv) To display ANO, ANAME, AMOUNT and DOT of those persons from ACCOUNT and TRANSACT table who have done transaction less than or equal to 3000

(v) SELECT ANO, ANAME FROM ACCOUNT WHERE ADDRESS NOT IN ('CHENNAI', 'BANGALORE');

(vi) SELECT DISTINCT ANO FROM TRANSACT;

15. Consider the following tables EMP and SALGRADE, write the query for (i) to (vi) and output for (vii) to (x)

TABLE: EMPLOYEE

ECODE	NAME	DESIG	SGRADE	DOJ	DOB
101	VIKRANT	Executive	S03	2003-03-23	1980-01-13
102	RAVI	Head-IT	S02	2010-02-12	1987-07-22
103	JOHN CENA	Receptionist	S03	2009-06-24	1983-02-24
105	AZHAR ANSARI	GM	S02	2009-08-11	1984-03-03
108	PRIYAM SEN	CEO	S01	2004-12-29	1982-01-19

TABLE-SALGRADE

SGRADE	SALARY	HRA
S01	56000	18000
S02	32000	12000
S03	24000	8000

- (i) To display details of all employee in descending order of their DOJ
- (ii) To display NAME AND DESIG of those employees whose sgrade is either 'S02' or 'S03'
- (iii) To display NAME, DESIG, SGRADE of those employee who joined in the year 2009
- (iv) To display all SGRADE, ANNUAL_SALARY from table SALGRADE [where ANNUAL_SALARY = SALARY*12]
- (v) To display number of employee working in each SALGRADE from table EMPLOYEE
- (vi) To display NAME, DESIG, SALARY, HRA from tables EMPLOYEE and SALGRADE where SALARY is less than 50000
- (vii) Select MIN(DOJ), MAX(DOB) from employee;
- (viii) Select SGrade, Salary+HRA from SalGrade where Sgrade='S02';
- (ix) Select count(distinct sgrade) from employee ;
- (x) Select sum(salary), avg(salary) from salgrade;

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Write the outputs of the SQL queries (i) to (iii) based on the relations CUSTOMER and TRANSACTION given below :

Table : CUSTOMER

ACNO	NAME	GENDER	BALANCE
C1	RISHABH	M	15000
C2	AAKASH	M	12500
C3	INDIRA	F	9750
C4	TUSHAR	M	14600
C5	ANKITA	F	22000

Table : TRANSACTION

ACNO	TDATE	AMOUNT	TYPE
C1	2020-07-21	1000	DEBIT
C5	2019-12-31	1500	CREDIT
C3	2020-01-01	2000	CREDIT

- (i)

```
SELECT MAX(BALANCE) , MIN(BALANCE) FROM CUSTOMER
WHERE GENDER = 'M' ;
```
- (ii)

```
SELECT SUM(AMOUNT) , TYPE FROM TRANSACTION
GROUP BY TYPE ;
```
- (iii)

```
SELECT NAME , TDATE , AMOUNT
FROM CUSTOMER C , TRANSACTION T
WHERE C.ACNO = T.ACNO AND TYPE = 'CREDIT' ;
```

17.

Anmol maintains that database of Medicines for his pharmacy using SQL to store the data. The structure of the table PHARMA for the purpose is as follows :

- **Name of the table** - PHARMA
- **The attributes of PHARMA are as follows :**
 - MID - numeric
 - MNAME - character of size 20
 - PRICE - numeric
 - UNITS - numeric
 - EXPIRY - date

Table : PHARMA

MID	MNAME	PRICE	UNITS	EXPIRY
M1	PARACETAMOL	12	120	2022-12-25
M2	CETRIZINE	6	125	2022-10-12
M3	METFORMIN	14	150	2022-05-23
M4	VITAMIN B-6	12	120	2022-07-01
M5	VITAMIN D3	25	150	2022-06-30
M6	TELMISARTAN	22	115	2022-02-25

- (a) Write the degree and cardinality of the table PHARMA.
- (b) Identify the attribute best suitable to be declared as a primary key.
- (c) Anmol has received a new medicine to be added into his stock, but for which he does not know the number of UNITS. So he decides to add the medicine without its value for UNITS. The rest of the values are as follows :

MID	MNAME	PRICE	EXPIRY
M7	SUCRALFATE	17	2022-03-20

Write the SQL command which Anmol should execute to perform the required task.

- (d) Anmol wants to change the name of the attribute UNITS to QUANTITY in the table PHARMA. Which of the following commands will he use for the purpose ?
- (i) UPDATE
 - (ii) DROP TABLE
 - (iii) CREATE TABLE
 - (iv) ALTER TABLE
- (e) Now Anmol wants to increase the PRICE of all medicines by 5. Which of the following commands will he use for the purpose ?
- (i) UPDATE SET
 - (ii) INCREASE BY
 - (iii) ALTER TABLE
 - (iv) INSERT INTO

18.

Write SQL statements for the following queries (i) to (v) based on the relations CUSTOMER and TRANSACTION given below :

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Table : TRANSACTION

ACNO	TDATE	AMOUNT	TYPE
C1	2020-07-21	1000	DEBIT
C5	2019-12-31	1500	CREDIT
C3	2020-01-01	2000	CREDIT

- (a) To display all information about the CUSTOMERs whose NAME starts with 'A'.
- (b) To display the NAME and BALANCE of Female CUSTOMERs (with GENDER as 'F') whose TRANSACTION Date (TDATE) is in the year 2019.
- (c) To display the total number of CUSTOMERs for each GENDER.
- (d) To display the CUSTOMER NAME and BALANCE in ascending order of GENDER.
- (e) To display CUSTOMER NAME and their respective INTEREST for all CUSTOMERs where INTEREST is calculated as 8% of BALANCE.

19.

MySQL database named WarehouseDB has a product_inventory table in MySQL which contains the following attributes:

- Item_code: Item code (Integer)
- Product_name: Name of product (String)
- Quantity: Quantity of product (Integer)
- Cost: Cost of product (Integer)

Consider the following details to establish Python-MySQL connectivity:

- Username: admin_user
- Password: warehouse2024
- Host: localhost

Write a Python program to change the Quantity of the product to 91 whose Item_code is 208 in the product_inventory table.

20.

(ii) Kabir wants to write a program in Python to insert the following record in the table named Student in MYSQL database, SCHOOL:

- rno(Roll number) - integer
- name(Name) - string
- DOB (Date of birth) - Date
- Fee - float

Note the following to establish connectivity between Python and MySQL:

- Username - root
- Password - tiger
- Host - localhost

The values of fields rno, name, DOB and fee has to be accepted from the user. Help Kabir to write the program in Python.