

# Strings

(i)	Write a Python program to print the length of the string entered by user. Eg: Enter string:Hello O/p Length of Hello is 5
(ii)	Write a program to print every character of a string entered by user in a new line using loop.
(iii)	Write a program to check if the letter 'e' is present in the word 'Umbrella'. if present print "e is present"
(iv)	Write a program to check if the word 'orange' is present in the "This is orange juice". ( use split() function)
(v)	Write a program to find the number of vowels, consonants, digits and white space characters in a string entered by user

# Tuples/ Dictionaries

(i)	Which of the following is a Python tuple? a) [1, 2, 3] b) (1, 2, 3) c) {1, 2, 3} d) {}
(ii)	What will be the output of the following Python code?  1. <code>&gt;&gt;&gt;t=(1,2,4,3)</code> 2. <code>&gt;&gt;&gt;t[1:3]</code>
(iii)	What will be the output of the following Python code?  1. <code>d = {"john":40, "peter":45}</code> 2. <code>d["john"]</code>
(iv)	What will be the output of the following Python code?  1. <code>&gt;&gt;&gt;t = (1, 2)</code> 2. <code>&gt;&gt;&gt;2 * t</code>

(v)	<p>What will be the output of the following Python code?</p> <pre>1. &gt;&gt;&gt;t1 = (1, 2, 4, 3) 2. &gt;&gt;&gt;t2 = (1, 2, 3, 4) 3. &gt;&gt;&gt;t1 &lt; t2</pre>
(vi)	<p>What will be the output of the following Python code?</p> <pre>&gt;&gt;&gt; a=(1,2,3,4) &gt;&gt;&gt; del(a[2])</pre> <p>a) Now, a=(1,2,4) b) Now, a=(1,3,4) c) Now a=(3,4) d) Error as tuple is immutable</p>
(vii)	<p>Write a Python script to add a key to a dictionary. Take the key and value as input from user</p> <p>Sample Dictionary : {0: 10, 1: 20} Expected Result : {0: 10, 1: 20, 2: 30}</p>
(viii)	<p>Write a Python script to check if a given key already exists in a dictionary.</p>

# List

(i)	Write a Python program to sum all the items in a list. Eg:Input:[1,2,3] O/p:6
(ii)	Write a Python program to get the largest number from a list Eg:input:[1,2,3] O/p:3
(iii)	Write a Python program to find the index of an item in a specified list. Eg: input:[1,2,3,4] Num=3 O/p:2
(iv)	What is the final output. L=[0,1,2,3,100] L.append('a') L.append('b') L.remove(2) L.pop() L.pop(0) print(L)

# Data Management

(i)	<p>Write an SQL query to create the table 'TEAMS' with the following structure:</p> <table border="1" data-bbox="289 352 773 716"> <thead> <tr> <th>Field</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>TeamCode</td> <td>Varchar(5)</td> </tr> <tr> <td>TeamName</td> <td>Varchar(5)</td> </tr> <tr> <td>TeamLeader</td> <td>Varchar(5)</td> </tr> <tr> <td>NoofMembers</td> <td>Integer</td> </tr> <tr> <td>Team_Symbol</td> <td>Char(1)</td> </tr> </tbody> </table>	Field	Type	TeamCode	Varchar(5)	TeamName	Varchar(5)	TeamLeader	Varchar(5)	NoofMembers	Integer	Team_Symbol	Char(1)								
Field	Type																				
TeamCode	Varchar(5)																				
TeamName	Varchar(5)																				
TeamLeader	Varchar(5)																				
NoofMembers	Integer																				
Team_Symbol	Char(1)																				
(ii)	<p>Write a MySQL command for creating a table "BANK" whose structure is given below:</p> <table border="1" data-bbox="289 863 1539 1045"> <thead> <tr> <th>Field</th> <th>Type</th> <th>Size</th> <th>Constraint</th> </tr> </thead> <tbody> <tr> <td>Acct_number</td> <td>Integer</td> <td>5</td> <td>Primary key</td> </tr> <tr> <td>Name</td> <td>Varchar</td> <td>4</td> <td>Not null</td> </tr> <tr> <td>BirthDate</td> <td>Date</td> <td></td> <td></td> </tr> <tr> <td>Balance</td> <td>Decimal</td> <td>(6,2)</td> <td></td> </tr> </tbody> </table>	Field	Type	Size	Constraint	Acct_number	Integer	5	Primary key	Name	Varchar	4	Not null	BirthDate	Date			Balance	Decimal	(6,2)	
Field	Type	Size	Constraint																		
Acct_number	Integer	5	Primary key																		
Name	Varchar	4	Not null																		
BirthDate	Date																				
Balance	Decimal	(6,2)																			
(iii)	Write SQL command to view the structure of EMP table.																				
(iv)	A table 'Customers' in a database has 5 columns and no rows in it. What is its cardinality ? What will be its cardinality if 4 rows are added in the table?																				
(v)	<p>Sarthya, a student of class XI, created a table "RESULT". Grade is one of the columns of this table. To find the details of students whose Grade have not been entered, he wrote the following MySql query, which did not give the desired result :</p> <pre>SELECT * FROM result WHERE grade = NULL;</pre> <p>Find what is wrong and rewrite the query.</p>																				
(vi)	What is the purpose of DROP TABLE command in MySQL? How is it different from DELETE command?																				
(vii)	Saumya had previously created a table named 'Product' in a database using MySQL. Later on She forgot the table structure. Suggest to her the suitable MySQL command through which she can check the structure of the already created table.																				
(viii)	Observe the table 'Club' given below:																				

**CLUB**

Member_id	Member_name	Address	Age	Fees
M001	Sumit	Manipur	20	1000
M002	Nisha	Kolkata	19	2100
M003	Niharika	Nagaland	17	1200

- (i) What is the cardinality and degree of the above given table?
- (ii) If a new column contact\_no has been added and two more members have joined the club then how these changes will affect the degree and cardinality of the given table.

(ix) Q9. The Doc\_name column of a table Hospital is given below:

Doc_name
Avinash
Hariharan
Vinayak
Deepak
Sanjeev

- (i) Select doc\_name from Hospital where doc\_name like "%v";
- (ii) Select doc\_name from Hospital where doc\_name like "%e%";

(x) Q13. Rewrite the following SQL statement after correcting error(s). Underline the corrections made.  
INSERT IN STUDENT(RNO, MARKS) VALUE (5 , 78.5) ;

(xi) Write one similarity and one difference between CHAR and VARCHAR data type.

(xii) Consider the table Projects given below. Write commands in SQL for (i) to (iv) and output for (v) to (viii)

Table : Project

ID	ProjName	ProjSize	StartDate	EndDate	Cost
1	Payroll-MM	Medium	2006-03-17	2006-09-16	60000
2	Payroll-ITC	Large	2008-02-12	2008-01-11	500000
3	IDMgmt-LITE	Large	2008-06-13	2009-05-21	300000
4	Recruit-LITE	Medium	2008-03-18	2008-06-01	50000
5	IDMgmt-MTC	Small	2007-01-15	2007-01-29	20000
6	Recruit-ITC	Medium	2007-03-01	2007-06-28	50000

- (i) To display all information about projects of Medium ProjSize.
- (ii) To list the Projsize of projects whose ProjSize ends with LITE.
- (iii) To list ID, Name, and cost of all the projects in descending order of StartDate.
- (iv) To count the number of Projects of cost less than 100000.
- (v) SELECT ProjName FROM Projects WHERE Cost NOT BETWEEN 50000 AND 60000;
- (vi) SELECT Distinct(ProjSize) FROM Projects;
- (vii) SELECT \* FROM Projects WHERE Cost < 100000 ;

(xiii)

Q3. Define the following terms :

- (i) Primary Key
- (ii) Candidate Key
- (iii) Alternate Key
- (iv) Foreign Key
- (v) Referential Integrity