Python Interview Questions:

1.Explain some benefits of Python

* Python is a **dynamic-typed** language. It means that you don’t need to mention the data type of variables during their declaration.
* Python supports **object-orientated programming** as you can define classes along with the composition and inheritance.
* **Functions** in Python are like **first-class objects**. It suggests you can assign them to variables, return from other methods and pass them as arguments.
* Developing using Python is quick but running it is often slower than compiled languages.
* Python has several usages like web-based applications, test automation, data modeling, big data analytics, and much more.

2. How do I modify a string in python?

>>> s = list("Hello zorld")

>>> s

['H', 'e', 'l', 'l', 'o', ' ', 'z', 'o', 'r', 'l', 'd']

>>> s[6] = 'W'

>>> s

['H', 'e', 'l', 'l', 'o', ' ', 'W', 'o', 'r', 'l', 'd']

>>> "".join(s)

'Hello World'

3. When to use a tuple vs list vs dictionary in Python?

* Use a **tuple** to store a sequence of items that *will not change*.
* Use a **list** to store a sequence of items that *may change*.
* Use a **dictionary** when you want to associate *pairs* of two items.

4. What is the most efficient way to concatenate many strings together?

chunks = []

for s in my\_strings:

chunks.append(s)

result = ''.join(chunks)

To accumulate many **str** objects, I would recommend placing them into a list and call **str.join()** at the end:

What are functions in Python?

A function is a block of code which is executed only when a call is made to the function. **def** keyword is used to define a particular function as shown below:

def function():

print("Hi, Welcome to Intellipaat")

function(); # call to the function

### ****How does break, continue, and pass work?****

**Python break**: This statement helps terminate the loop or the statement and pass the control to the next statement.

**Python** **continue**: This statement helps force the execution of the next iteration when a specific condition meets, instead of terminating it.

**Python** **pass**: This statement helps write the code syntactically and wants to skip the execution. It is also considered a null operation as nothing happens when you execute the pass statement.

### ****Explain all file processing modes supported in Python?****

For opening files, there are three modes:

* read-only mode (r)
* write-only mode (w)
* read–write mode (rw)

### ****How will you remove duplicate elements from a list?****

To remove duplicate elements from the list we use the set() function.

Consider the below example:

demo\_list=[5,4,4,6,8,12,12,1,5]

unique\_list = list(set(demo\_list))

output:[1,5,6,8,12]

SQL:

1. What is the difference between the “DELETE” and “TRUNCATE” commands?

The DELETE command is used to remove rows from a table based on a WHERE  
condition whereas TRUNCATE removes all rows from a table.

DELETE is a DML command whereas TRUNCATE is a DDL command,

Delete activates a trigger because the operation is logged individually whereas  
TRUNCATE TABLE can't activate a trigger because the operation does not log  
individual row deletions.

1. .What is the difference between “Primary Key” and “Unique Key”?

We can have only one Primary Key in a table whereas we can have more than one  
Unique Key in a table.

The Primary Key cannot have a NULL value whereas a Unique Key may have only  
one null value.

A Primary Key supports an Auto Increment value whereas a Unique Key doesn't  
support an Auto Increment value.

1. What are the differences between DDL, DML and DCL in SQL?  
   Ans: Following are some details of three.  
   DDL stands for Data Definition Language. SQL queries like CREATE, ALTER, DROP and  
   RENAME come under this.  
   DML stands for Data Manipulation Language. SQL queries like SELECT, INSERT and  
   UPDATE come under this.  
   DCL stands for Data Control Language. SQL queries like GRANT and REVOKE come under  
   this.
2. What is Join?  
   Ans: An SQL Join is used to combine data from two or more tables, based on a common  
   field between them.

. What are the advantages and disadvantages of views in a database?  
Advantages:

1. Views doesn't store data in a physical location.
2. View can be use to hide some of the columns from the table
3. Views can provide Access Restriction, since data insertion, update and deletion is not  
   possible on the view.  
   Disadvantages:
4. When a table is dropped, associated view become irrelevant

5. Write the query to get the department and department wise total(sum) salary from "EmployeeDetail" table.  
Ans: SELECT Department, SUM(Salary) AS [Total Salary] FROM [EmployeeDetail]

GROUP BY Department

**43. Write the query to get the department and department wise total(sum) salary, display it in ascending order according to salary.**  
**Ans:**SELECT Department, SUM(Salary) AS [Total Salary] FROM [EmployeeDetail]

GROUP BY Department ORDER BY SUM(Salary) ASC

**Write the query to get the department, total no. of departments, total(sum) salary with respect to department from "EmployeeDetail" table.**  
**Ans:**SELECT Department, COUNT(\*) AS [Dept Counts], SUM(Salary) AS [Total Salary] FROM [EmployeeDetail]

GROUP BY Department