

SETS - THEORETICAL QUESTIONS

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Q.1 What is a set in Python? What are the advantages using a set over a list?

Ans: A set in Python is a collection of unique values where order does not matter. It removes duplicate values automatically and allows us to perform operations like union and intersection etc.

Q.2 Explain the difference between union and intersection in sets with examples.

Ans: In simple words, the major difference is that Union combines all the elements from two or more than two sets without duplicating the values and Intersections finds the common element present in Set A and Set B.

Example (Union):

A = {1, 2, 3}

B = {a, b, c}

print(A | B) # Union

Output: {1, 2, 3, a, b, c}

Example (Intersection):

A = {1, 2, 3, 4, 5, 6}

B = {6, 1, 9, 8, 7, 7, 3}

print(A & B)

Output: {1, 3, 6}

Q.3 What is a frozen set? How is it different from a normal set?

Ans: A frozen set is known as immutable set in python. Which means you cannot add or remove elements after set is being created.

Q.4 Can a set contain duplicate elements? Why or why not?

Ans: No, a set cannot contain duplicate elements the reason is that sets automatically removes duplicate values and stores only unique values.

Q.5 Explain how sets handle unordered data. Provide an example.

Ans: Sets are unordered and unchangeable which means that their order can vary each time when they are used.

Example:

```
a = {3, 2, 4, 1, 5}
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print(a)
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Output might be {1, 2, 3, 4, 5}
