

Full stack web development using python

Set



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Agenda

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- ② Creating set object
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Set

set is a class

set is mutable

set is not hashable

set is iterable

set is not a sequence

set cannot have duplicate values

indexing is not applicable to set object

slicing operator is not applicable

set does not guarantee to store values
in the order of insertion

How to create set object?

S1 = { 1, 5, 8 }

S2 = { 10, 2, 8, 10, 10, 8 }

S3 = { } not a set object

S4 = set()

S5 = set([1, 5, 3])

Accessing set elements

```
for e in setObject:  
    code
```

built-in methods

len()

min()

max()

sum()

sorted()

Concatenation and Repetition Operator

set + set

not supported

set * int

not supported

Comparison Operator

$S_1 > S_2$

$S_1 < S_2$

$S_1 \geq S_2$

$S_1 \leq S_2$

$S_1 == S_2$

$S_1 != S_2$

Supported

Two set objects are equal if their elements are same , doesn't matter the order of elements.

set object methods

add() add specified item in a set
update() add iterable(s) elements
discard() remove item
remove()
intersection()
union()
clear()
issubset()
is superset()
pop()

Set Comprehension

$S1 = \{ \text{expression} \text{ for } e \text{ in object} \}$

$s = \text{input("Enter a string")}$

$S1 = \{ e \text{ for } e \text{ in } s \text{ if } e \text{ in "aeiou"} \}$

```
for e in S:  
    if e in "aeiou":  
        S1.add(e)
```

User input

S = input("Enter elements separated by comma")

Sl = {eval(e) for e in S.split(',') }

doubts

age = int(input())

match age :

case age if age < 10 :

case age if age < 20 :

$n = \text{int}(\text{input}())$

match n:

case n if $n \% 2 == 0$:

case n if $n < 0$ and $n \% 2$:

case n if $n > 0$ and $n \% 2$: