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Bisect Module In Python Explained | Advanced python tutorials

Introduction:

In this blog we will talk about a module named bisect. We will talk about some functions of it and how is it helpful for us?

Bisect Module:

It is an in-built module. You can simply import it by writing:

import bisect

This module is helpful when we want to know where should we insert our value in a list. This is how it works:

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```
import bisect
lis = [1,2,5,10,15,17,28,35,59,61]
print(bisect.bisect(lis, 55))
Output:
8
```

Start count from zero and yes it should be at 8th place(right now 59 is on 8th place). It also works on alphabets. Eg:

```
import bisect
lis1 = ["a","e", "h", "m", "o", "s"]
print(bisect.bisect(lis1, "k"))
Output:
3
```

k should be between h and m and if we start count from zero then according to this module it should be on m's place which is correct. Earlier m's index was be 3 now it's 4 because k's index is 3.

If this is confusing then this module offers one more function called "insort()" which will make things easy for you. Here is how it works:

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```
import bisect

lis = [1,2,5,10,15,17,28,35,59,61]
print(bisect.bisect(lis, 55))
bisect.insort(lis, 55)
print(lis)

Output:
8
[1, 2, 5, 10, 15, 17, 28, 35, 55, 59, 61]
```

See, insort() function itself added 55 in the list. Similarly,

```
import bisect

lis1 = ["a","e", "h", "m", "o", "s"]
print(bisect.bisect(lis1, "k"))
bisect.insort(lis1, "k")
print(lis1)

Output:
3
['a', 'e', 'h', 'k', 'm', 'o', 's']
```

It added k in the list.

In this way we can use this module.

Note: It does tell you where to place the value but your list should be sorted. If your list has randomly things placed in it then module may lead to wrong conclusion. Also it doesn't give you any warning that your list is not sorted.

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