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**Intersection****X96828\_en**

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Let  $a, b, c, d$  be integers such that  $a \leq b$  and  $c \leq d$ . Write a function `@intersection(a, b, c, d)@` that assuming that intersection of intervals  $[a, b]$  and  $[c, d]$  is non empty returns the tuple of integers  $(p, q)$  such that  $[p, q] = [a, b] \cap [c, d]$ .

**Sample session**

```
>>> intersection(1, 5, 3, 7)
(3, 5)
>>> intersection(10, 16, 12, 15)
(12, 15)
>>> intersection(3, 5, 2, 11)
(3, 5)
>>> intersection(1, 4, 4, 6)
(4, 4)
```

**Problem information**

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