QUIZ 4

COMP9021 PRINCIPLES OF PROGRAMMING

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$ python3 quiz_4.py
Enter two integers between 2 and 50,000,000: 4 4

There are no primes between 4 and 4.
$ python3 quiz_4.py
Enter two integers between 2 and 50,000,000: 3 3

Some primes between 3 and 3 have no two distinct digits.
Amongst the primes in that range that have a minimal number of
  distinct digits, the longest ones have 1 digit.
There is actually a unique such prime; it is 3.
$ python3 quiz_4.py
Enter two integers between 2 and 50,000,000: 3 5

Some primes between 3 and 5 have no two distinct digits.
Amongst the primes in that range that have a minimal number of
  distinct digits, the longest ones have 1 digit.
The smallest such prime is 3, and the largest such prime is 5.
$ python3 quiz_4.py
Enter two integers between 2 and 50,000,000: 7 2

Some primes between 2 and 7 have no two distinct digits.
Amongst the primes in that range that have a minimal number of
  distinct digits, the longest ones have 1 digit.
The smallest such prime is 2, and the largest such prime is 7.
$ python3 quiz_4.py
Enter two integers between 2 and 50,000,000: 100 30

All primes between 30 and 100 have at least 2 distinct digits.
Amongst the primes in that range that have a minimal number of
  distinct digits, the longest ones have 2 digits.
The smallest such prime is 31, and the largest such prime is 97.
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$ python3 quiz_4.py
Enter two integers between 2 and 50,000,000: 1_000 4_000

All primes between 1000 and 4000 have at least 2 distinct digits.
Amongst the primes in that range that have a minimal number of
  distinct digits, the longest ones have 4 digits.
The smallest such prime is 1117, and the largest such prime is 3833.
$ python3 quiz_4.py
Enter two integers between 2 and 50,000,000: 50_000 51_000

All primes between 50000 and 51000 have at least 3 distinct digits.
Amongst the primes in that range that have a minimal number of
  distinct digits, the longest ones have 5 digits.
The smallest such prime is 50033, and the largest such prime is 50909.
$ python3 quiz_4.py
Enter two integers between 2 and 50,000,000: 35_000 175_000

All primes between 35000 and 175000 have at least 2 distinct digits.
Amongst the primes in that range that have a minimal number of
  distinct digits, the longest ones have 6 digits.
The smallest such prime is 101111, and the largest such prime is 161611.
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