

S03-L04

Partial index

S03-L04 Partial index

Instead of indexing the entire last name, you might index only the first 4 bytes:

```
ALTER TABLE phone_book ADD INDEX (last_name(4))
```

In doing so, you've reduced the space requirements for the data portion of the index by roughly half. The trade-off is that MySQL can't eliminate quite as many rows using this index. A query such as:

```
SELECT * FROM phone_book WHERE last_name = 'Smith'
```

retrieves all fields beginning with Smit, including all people with name Smith, Smitty, and so on. The query must then discard Smitty and all other irrelevant rows.