* **Slow running query on sylectus5 (the original query executes in 28.6s).**

SELECT COUNT(\*) FROM ProLegs WHERE (MABCode = ?) AND (ProNum = ?);

2SELECT COUNT(\*) FROM ProLegs WHERE (MABCode = 482) AND (ProNum = 2267619);

**Explanation**:

* the order of columns in the index “proLegs\_1” is not good, “ProNum” is high cardinality, it should be the first index column.
* we have another index based on the unique key UNIQUE KEY `ProLegs\_0` (`ProSequence`,`ProNumUK`) which are nearly same with the index of the unique key ProLegs\_1 (ProSequence,ProNum,MABCode). There are redundant indexes.

**Solution:**

Replace existing unique key ProLegs\_1 (ProSequence,ProNum,MABCode) with the new one ProLegs\_1\_ptb **(**ProNum**,**ProSequence**,**MABCode**).**

**Result: after tuning, the query executes in 20ms**

--- Create new unique key, then drop the existing one.-- execute in 30 mins

ALTER TABLE ProLegs ADD CONSTRAINT ProLegs\_1\_ptb UNIQUE (ProNum, ProSequence,MABCode);

ALTER TABLE ProLegs DROP INDEX ProLegs\_1;

--- Statistic information on sylectus5

select count(distinct ProSequence) FROM ProLegs; --- 45

select count(distinct MABCode) FROM ProLegs; --- 10

select count(distinct ProNum) FROM ProLegs; -- 1,932,582