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Database performance improvements

1. We will create three different partitions on *Payment* table. We will compare two types of partitions . First we will use range partitioning (partition *1* for values less than 2000, partition *2* for values less than 4000, partition *3* for values less than 6000 and partition *4* for remaining values).
   Then we will use hash partitioning and automatically split the *Payment* table into four parts.
   We will move two partitions into USB drive.
   The reason for doing such thing is that we intensively use *Payments* in two select queries. Additionally in one query we strictly use values bigger than 6000.

2. We will create two different partitions on *Passenger* table. We will compare two types of partitions. First we will use range partitioning (partition *1* for number of flights less than 100 and partition *2* for remaining values).
   Then we will use hash partitioning and automatically split the *Passenger* table into two parts.
   We will move one partition into USB drive.
   The reason for doing such thing is that we update P*assenger* in two queries.

3. We will create B-Tree index on *departure date* in *Flight* table date and we will compare it with bitmap index. B-Tree index should better meet our needs because it's useful when the data are highly varied. Our *departure dates* are created as dates between 2014 and 2017. Additionally we often use *departure date* of different flights and creating index on *departure date* should significantly boost the queries.

4. We will create composite index on *Payment* table on *payment ID*, *amount paid* and *isCardPayment*. During one query we select (in subquery) ID's of payments, where *amount paid* is 6000 and the transaction is done by card / cash.

5. We will create bitmap index on *Airplane* table on *brand* attribute and we will compare it with B-Tree index. Bitmap index should better meet our needs because there is not so many different airplane brands. The reason for this index is that we use brand names in two transactions.