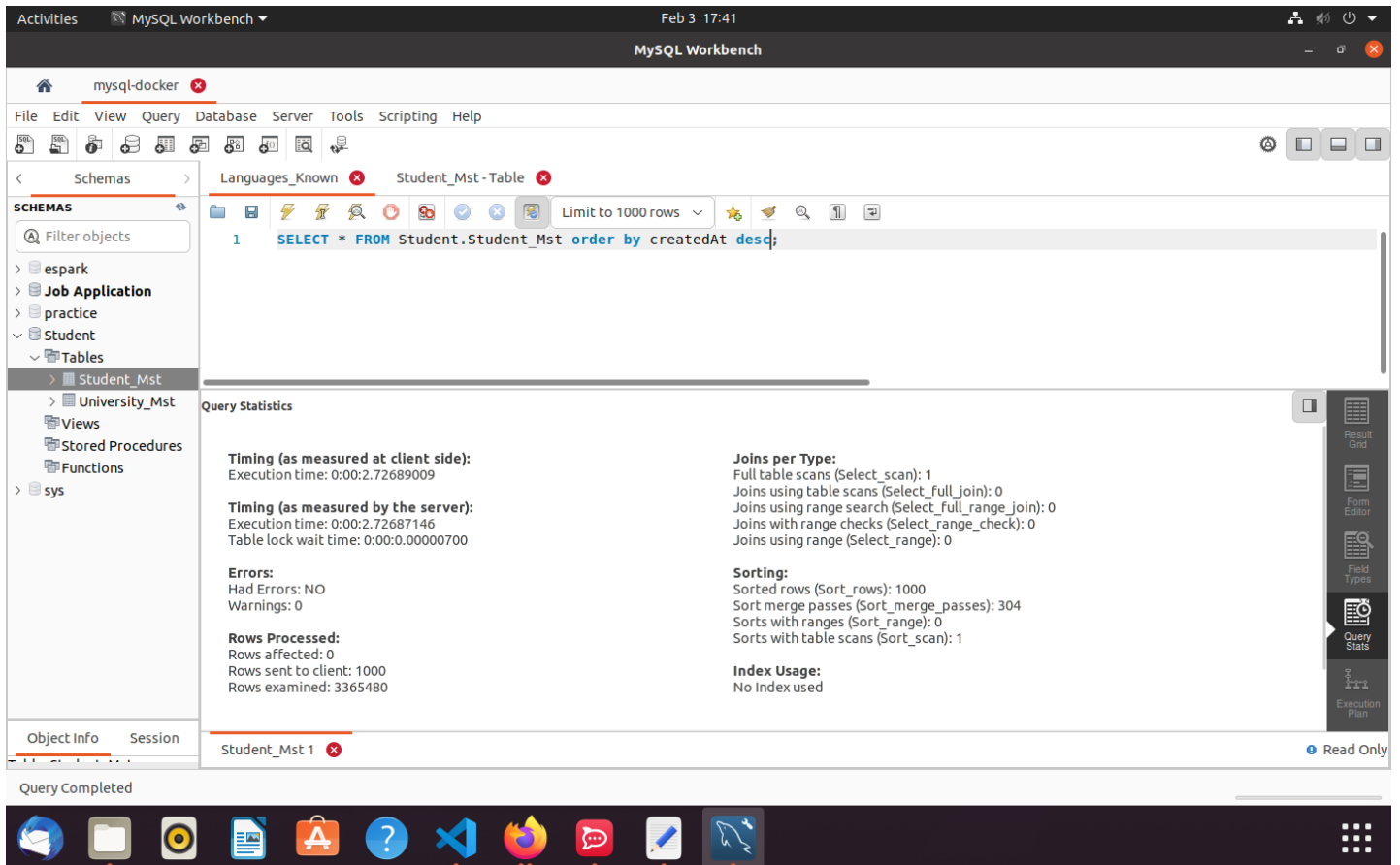


## Concept of Index:



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The left sidebar shows the Schemas tree with the following structure:

- espark
- Job Application
- practice
- Student
  - Tables
    - Student\_Mst
- University\_Mst
- Views
- Stored Procedures
- Functions
- sys

The main query editor shows the following SQL query:

```
1 SELECT * FROM Student.Student_Mst order by createdAt desc;
```

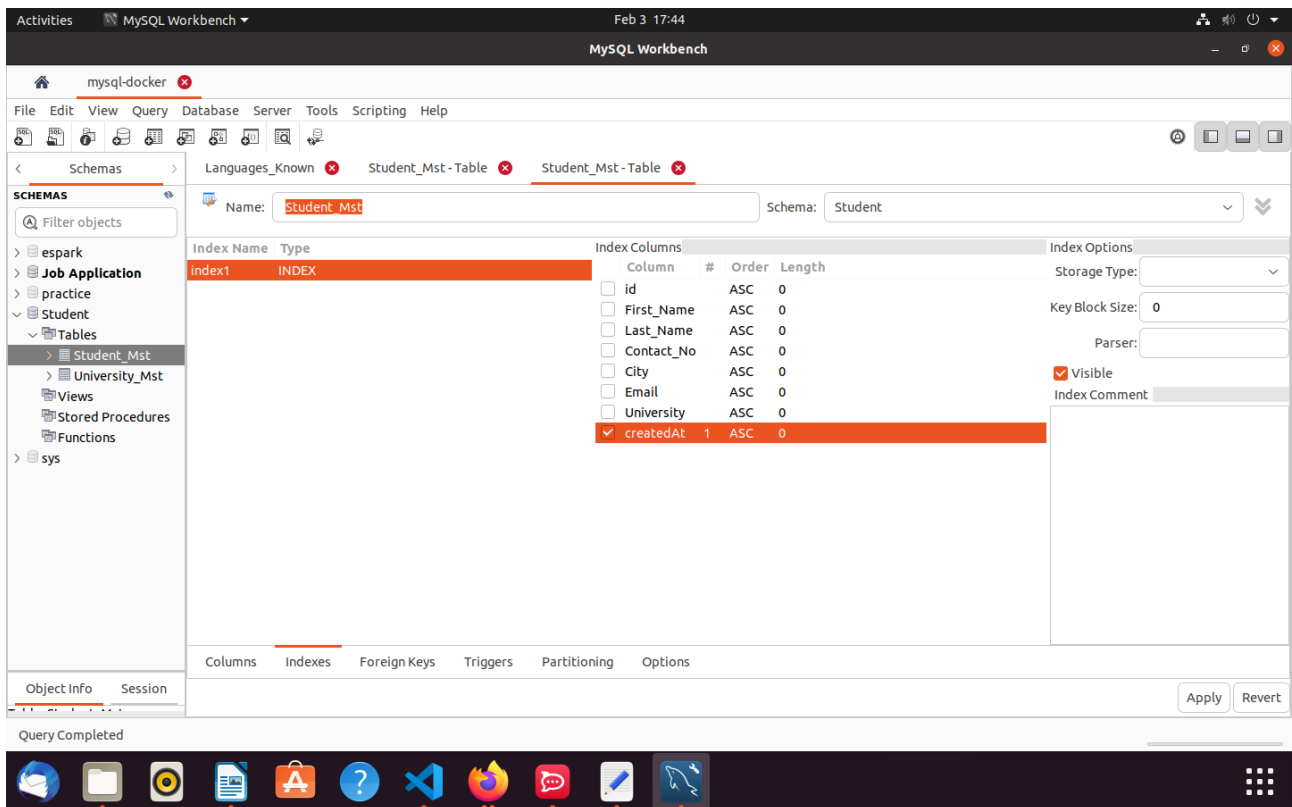
The Query Statistics panel displays the following information:

- Timing (as measured at client side):**  
Execution time: 0:00:2.72689009
- Timing (as measured by the server):**  
Execution time: 0:00:2.72687146  
Table lock wait time: 0:00:0.00000700
- Errors:**  
Had Errors: NO  
Warnings: 0
- Rows Processed:**  
Rows affected: 0  
Rows sent to client: 1000  
Rows examined: 3365480
- Joins per Type:**  
Full table scans (Select\_scan): 1  
Joins using table scans (Select\_full\_join): 0  
Joins using range search (Select\_full\_range\_join): 0  
Joins with range checks (Select\_range\_check): 0  
Joins using range (Select\_range): 0
- Sorting:**  
Sorted rows (Sort\_rows): 1000  
Sort merge passes (Sort\_merge\_passes): 304  
Sorts with ranges (Sort\_range): 0  
Sorts with table scans (Sort\_scan): 1
- Index Usage:**  
No Index used

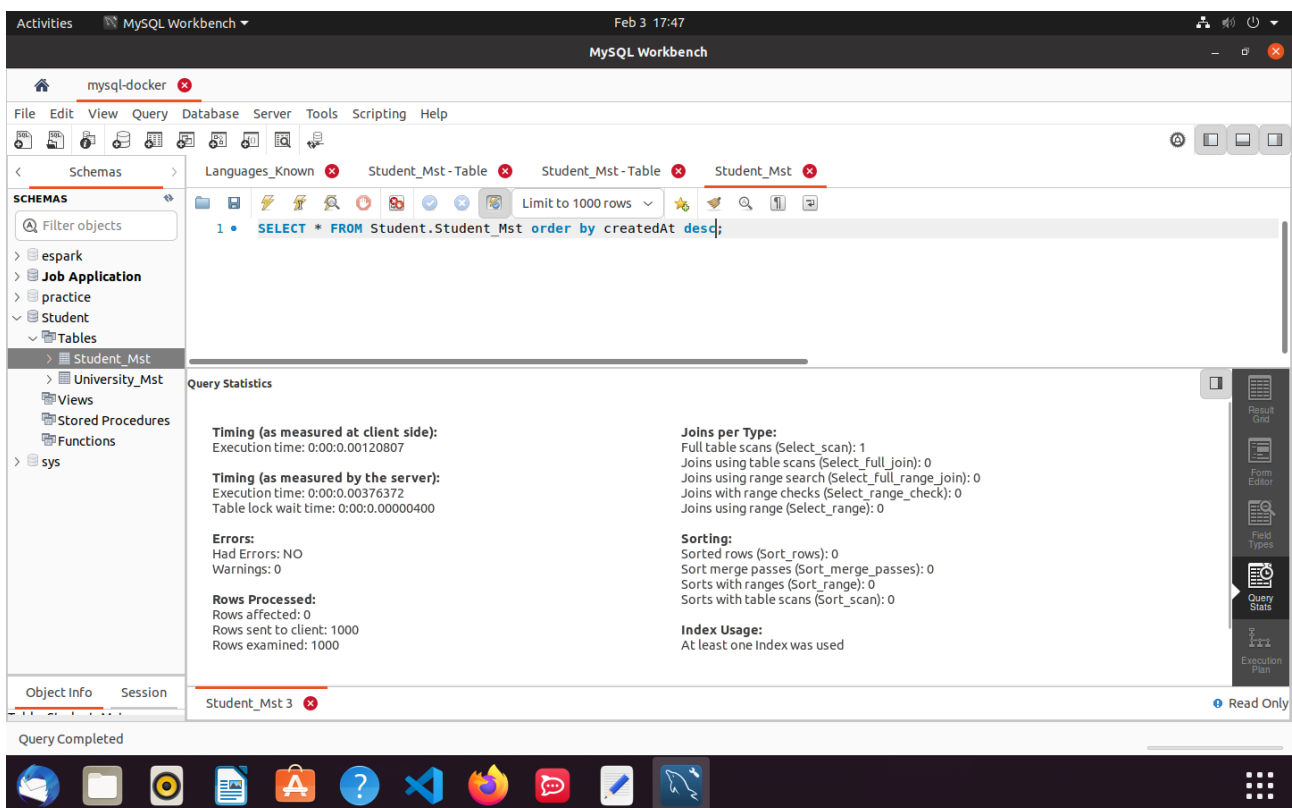
The bottom status bar indicates "Query Completed" and "Student\_Mst 1" with a "Read Only" indicator.

It took almost 3 seconds to load the data from the database without an index.

Now, let's create an index on Student\_Mst table and on "createdAt" column.



Now, let's run that previous query again. Creating an index will take some time.



The execution time has been reduced drastically.