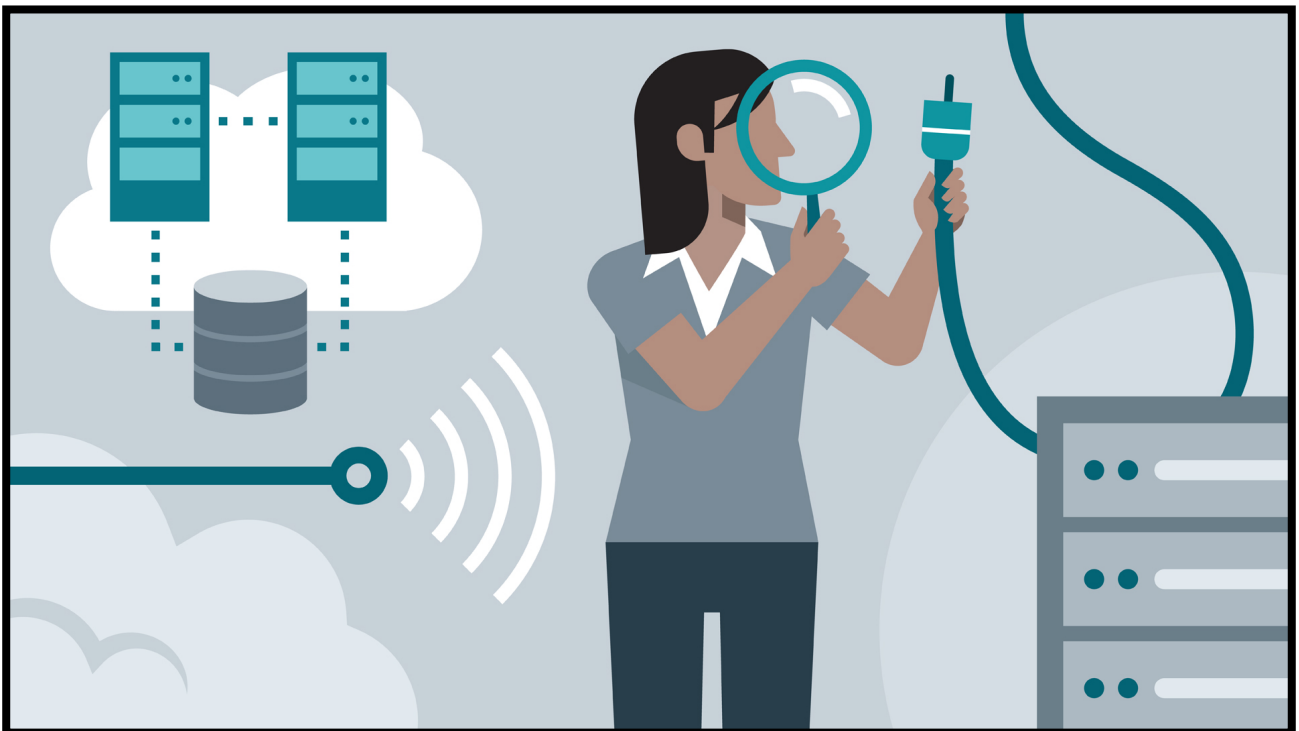


# DBMS Project

## *Work In Progress Document*



Source: [www.lynda.com](http://www.lynda.com)

## Team(76): Inferno

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# Abstract

What can you relate to after seeing this picture, “Government school” is probably the first thing coming to your mind. Do you know that there are about 1 lakh government schools in India and about 1225 Kendriya Vidyalaya schools? These schools follow the same curriculum and guidelines but still lack efficient interconnection.



Source: <https://www.google.co.in/imghp?hl=en&tab=wi&ogbl>

It is apparent that the absence of proper technologies and systems is responsible for a slow and inefficient school management. These days only a few government schools which are located in posh areas and probably have some CBSE toppers get the benefits of a good education from the government. But what if we bring it all together? Since the internet is accessed by every section of society, therefore, using this, we can change the disparities and make an effort to provide a better form of education to these students.



We have designed a database management system and portal to knit together various government schools and maintain their records digitally. It helps in establishing a better relationship between students and higher authorities. The students can use the portal to access books, assignments and exam details. The teachers can use it to analyse student performance and identify problems faced by students. This portal also allows the teachers to directly give an online report to the student instead of conducting a meeting. It also provides parents, ways to monitor their children regularly and not just in parent-teacher meetings. So basically, the government's work becomes more accessible and efficient as it leads to establishing an almost direct relationship with its students.

The data pertaining to exams, grades, attendance, performance, official notices can be accessed by the stakeholders easily and updates can be incorporated in the system faster.



The education ministry can monitor the statistics of all the schools and assign them a ranking. They can also infer a lot of details about student health and performance through interconnected records. All these details are required by the government to launch schemes for the welfare of the students and teachers. The system also provides a feedback system to strengthen the operations of schools.

# Stakeholders

## Student

A student is a significant entity for our project because all we aim is to make a change in the lives of those peers who lack due to scarcity of knowledge and technology. So in our portal, a student is exposed to various features which are essential in his/her daily school life and if combined with technology could lighten their workload and can increase their academic performance. Some of the ways in which a student can use our portal are as follows.

- Check the due date of Exams/Assignments, which are held at all government schools at the same time and day for a particular class.  
Data Entities: Student, Exams, Assignments
- Check their attendance to help them keep track of their regularity towards the school.  
Data Entities: Student, Attendance
- Check overall performance after the completion of their formative assessments.  
Data Entities: Student, Grades
- Update feedback of teachers so that better communication can be developed between students and teachers.  
Data Entities: Student, Teachers
- Enquire about the schedule of all the classes of a particular day.  
Data Entities: Student, Time Table

## Parent

As much it is crucial for the students to have the liberty to design their study patterns, it is equally important for parents to keep track of their children's school life as well as their academic performance. It also helps the parents to establish an open relationship with the school instead of attending semester parent-teacher meetings; here, a parent can analyse his child's performance daily and effectively. A parent can easily enquire about various things.

- Know the performance of the child, either overall or subject-wise.  
Data Entities: Parent, Student, Grades
- Enquire about the fee details.  
Data Entities: Parent, Student, Fee\_Details
- Know about the ranking of a particular Government School either the school the child is studying in or about other schools where you are considering for a transfer as school transfers are easy in government schools.  
Data Entities: Parent, Student, School
- Enquire whether the status of scholarship provided by the government is approved?  
Data Entities: Parent, Student
- Providing the feature of updating personal details like address, account number.  
Data Entities: Parent

## **Teachers**

Since a child spends almost half of his day with his/her teachers, therefore, it is necessary that a student can easily communicate with teachers. As a part of the teachers' responsibility, it is essential to analyse the work and progress report of each student in the class. Since it is tedious to keep track of each student, therefore our portal provides many features to teachers that help in understanding students better. A teacher can analyse various details about students.

- To know the grades of a particular student.  
Data Entities: Teacher, Student, Grades
- Enquire about the highest grades about a subject.  
Data Entities: Teacher, Student, Exam
- Self-evaluating their feedback so that it can help to understand the students' expectations from their teachers.  
Data Entities: Teacher
- Uploading regular assignments for practice, since all government schools work on the same pattern; therefore, students can discuss assignments even from different schools.  
Data Entities: Teacher, Assignments
- Knowing about the number of submissions of a particular assignment so that the difficulty of assignment can be evaluated.  
Data Entities: Teacher, Assignments

## **Administration**

Teachers and students do not complete the requirements of a school as the administration is imperative for managing the requirements of a school. As it is said, better the administration, better the school, so here in our portal, we provide various features to the administration to establish a balanced relationship of control with its students and teachers, thus promoting better education. An administration has various authorities.

- Enrolling new students and assigning them their classrooms and usernames for the portal.  
Data Entities: Administration, Student
- Enrolling new teachers for better learning.  
Data Entities: Administration, Teachers
- Knowing about their school's performances and rank in comparison to other schools and thus working towards continuous self-evaluation and hard-work to achieve a better rank.  
Data Entities: Administration, School
- Knowing about a particular teacher's feedback or like about the years of service.  
Data Entities: Administration, Teacher
- Knowing about fee status of a student.  
Data Entities: Administration, Student, Fee\_Details

## **Education Ministry**

Since all the government schools are interlinked, that is all assignments/exams, or important announcements takes place at the same time and day. Therefore, it is important that there is an authority which can interlink all the schools and it does not happen that some schools only get the attention of government. Every school and its students & teachers should be able represent themselves on a much broader platform. If the ministry is providing some scholarships or any relevant notices, then all students should have an equal chance of availing them. Building on many such parameters, in our portal, the Education Ministry plays a vital role and can carry out various tasks.

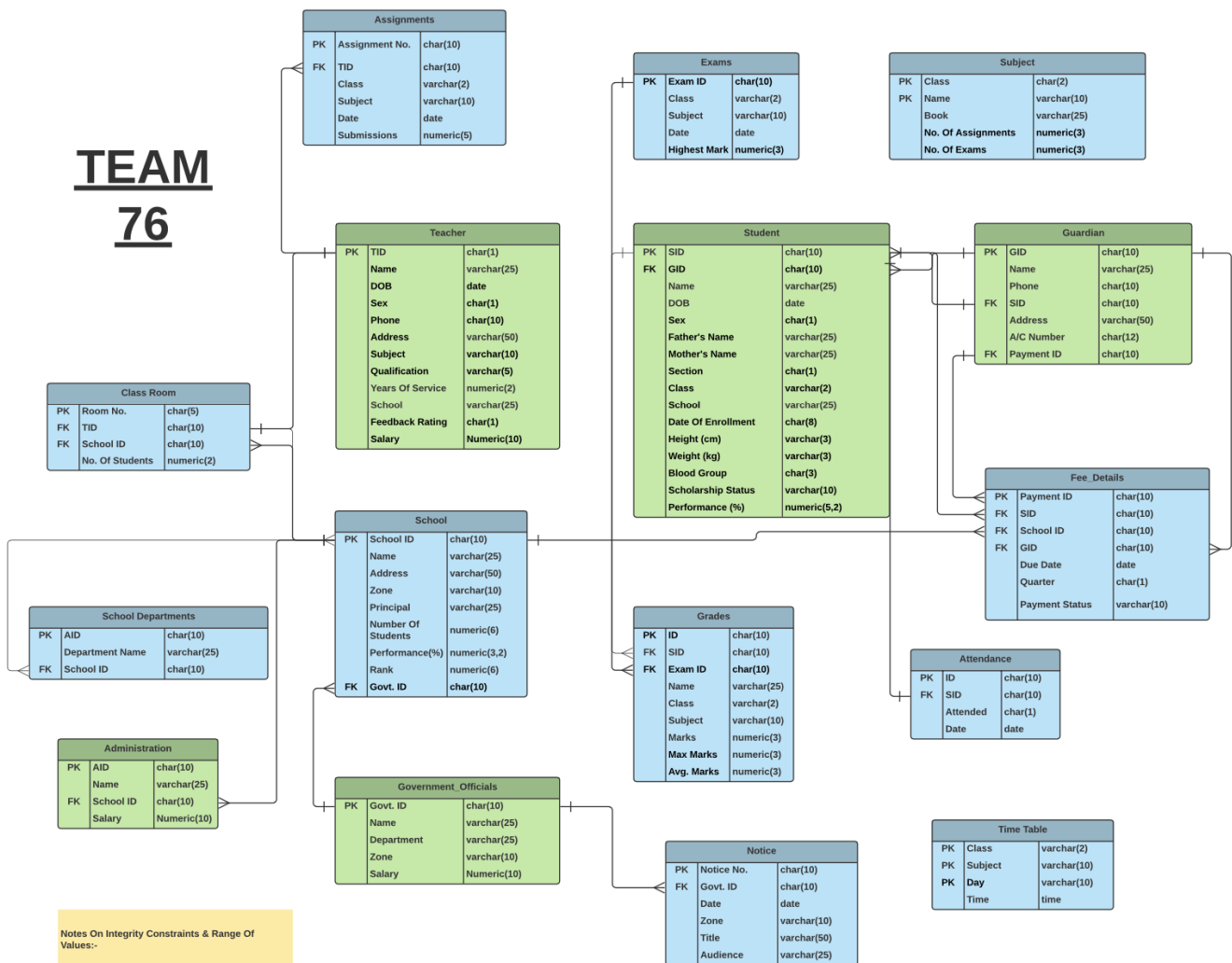
- Issue important announcements or Notices for Students/ Teachers/ Administration.  
Data Entities: Government, Notice, School
- Assigning the ranking to its schools, there are almost 326 government schools in Delhi, all of them following the same curriculum and same activities. Therefore each school must assess itself with others.  
Data Entities: Government, Administration, School
- Knowing about the students who have don't have an appropriate Body Mass Index, it is essential to care about the health of its students' as good health is a critical criterion for measuring happiness and excelling in studies.  
Data Entities: Government, Student, School
- List all the teachers from a specific school who are in the post of PGT.  
Data Entities: Government, School , Teacher
- Approving Scholarships for students.  
Data Entities: Government, Administration, Student
- Finding the number of students of a specific school or of all schools who are approved for a scholarship.  
Data Entities: Government, Administration, Student

# Relation Schema & Integrity Constraints

**Note:** A separate pdf file is uploaded for the same. All required details have been presented in the schema.

## Database System For Government Schools

**TEAM  
76**



Notes On Integrity Constraints & Range Of Values:-

- + Almost all data in this database is important for proper working and thus should not be null.
- + All the IDs are 10 character long and unique for each type.
- + Student and school performance are stored as percentage.
- + Class is a number from 1 to 12.
- + Scholarship Status : Yes / No
- + Attended: Y / N
- + Zone represents area
- + Payment Status : Paid / Due
- + Information about the primary keys and foreign keys referencing has been represented in the diagram.

- Anuneet Anand

# Brief Overview Of Work

We conducted 3 meetings in the past few weeks and brainstormed about various domains which we can improve by efficient database management systems. We initially thought of working on a blog system and a music recommendation system. But various advance technologies already exists for the same. So we focused on the areas which lack efficient data management. One such area is of government schools. Reading various articles online we concluded that the present system needs amendments and a better interconnection. Thus we took up this project idea.

- Himanshi identified the various stakeholders and their roles in our portal.
- Anuneet designed the relation schema, carefully describing all relationships, attributes and integrity constraints.
- Srijan identified the organisation of schools and devised ways to connect them together efficiently
- MD. Talib & Vikas provided important insights and data for the design.

For the rest of the project, we planned that:

Srijan would work on front-end and organisation.

Anuneet would code the back-end and link the SQL efficiently to the main program and design the necessary algorithms.

Himanshi would work on SQL queries.

Vikas & MD. Talib will populate the data and look for flaws.