

RAILWAY RESERVATION AND MANAGEMENT SYSTEM

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ABSTRACT

When we first discussed the what the topic of our projects for database management system would be, the first thought that came to our minds was that of the Indian railway system. The Indian Railways is one of the largest in the world, so it stands to reason that it also manages one of the largest databases as well, especially with the our country being the second largest population in the world. Our aim was to make something as close to it as possible, a system would allow a person to know the timings of trains, book to tickets to them, cancel the tickets and also implemented a login system for them. As for the platform, we decided unanimously that a website would be better than a mobile application.

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INTRODUCTION

OBJECTIVES AND GOALS

Our goal was to implement a database management system for a railway system similar to that of the Indian Railway System, but at a much smaller scale. Some of the features we included are:

- 1. View schedule of various trains**
- 2. View the remaining number of seats in each train**
- 3. Book tickets for trains of their choosing**
- 4. Cancel ticket that have already been booked**
- 5. A login system.**

LANGUAGES USED

The languages that we decided on initially were soon modified when we realized there would be some compatibility issues. The one we finally used included :

- 1) HTML (Front end)**
- 2) CSS (Front end)**
- 3) JavaScript (Application programming)**
- 4) NodeJS (Back end)**

DATABASES USED

The way we stored the databases was using a package 'neDB' which is a subset of the MongoDB API, a NoSQL. The following databases were used for the project:

1) Train Schedule Database

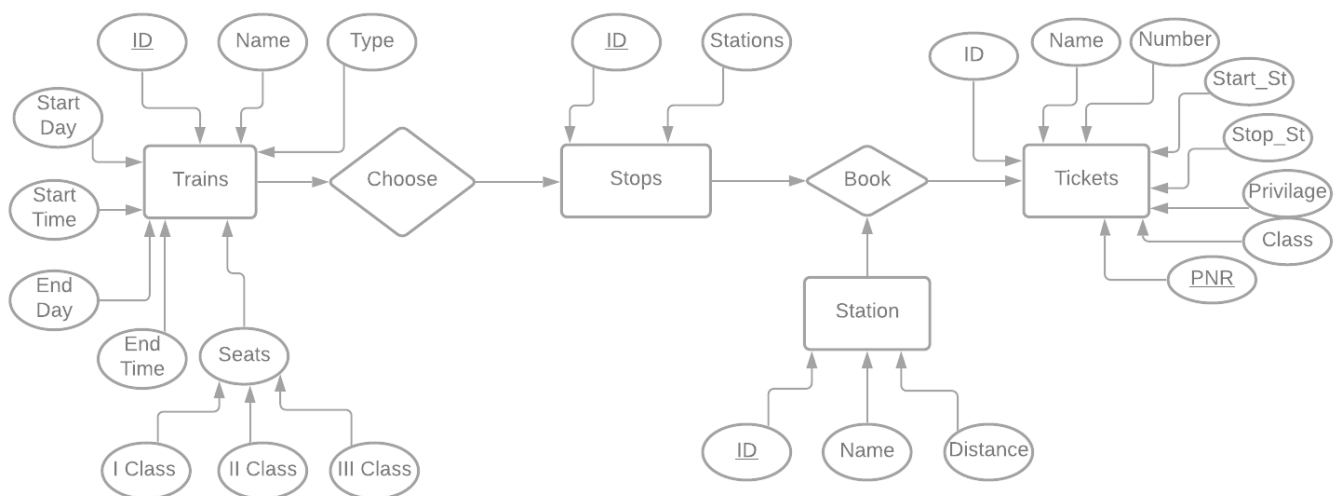
2) Train Stops Database

3) Station Database

4) Ticket Database

5) Login Database

ER Diagram




GitHub Repository Link

<https://github.com/SamuelShaju/RailwayManagementSystem.git>

RESULT AND OUTPUT

Login Page:

 LOGIN or SIGN UP

Sign Up Page:

 SIGN UP or LOGIN

Home Page :



[Booking Counter](#) [Schedule](#) [Cancellation](#)




Schedule Page:



[Home](#) [Booking Counter](#) [Cancellation](#)

ID	Name	Type	ClassI Total	ClassI Remaining	ClassII Total	ClassII Remaining	ClassIII Total	ClassIII Rem	Start Day	Start Time	End Day	End Time	Starting Station	Final Station	
2073	Train I	Normal	100	100	150	96	500	500	2	1300	6	1930	2	10	Book
2008	Train A	Super	20	8	50	23	100	98	0	1300	1	1230	1	10	Book
2076	Train H	Fast	25	25	80	71	300	300	2	1400	5	1430	1	9	Book
2009	Train F	Super	20	20	50	44	100	94	1	2300	6	1130	3	9	Book
2056	Train C	Fast	30	30	60	57	100	100	3	1400	5	1430	1	7	Book
2063	Train E	Slow	120	120	200	200	800	800	3	1100	7	2330	1	10	Book
2064	Train D	Normal	80	80	100	95	500	482	1	2200	3	1630	3	8	Book
2058	Train B	Super	30	30	50	50	100	100	5	1900	6	1330	4	10	Book
2053	Train J	Slow	100	100	200	200	900	900	0	1200	6	1330	1	10	Book
2086	Train G	Fast	30	30	70	70	300	300	4	1600	5	2230	2	8	Book

Booking Page:



HomeScheduleCancellation

Train ID :2056

Choose Starting Station:
AAA

Choose End Station:
EEE


Enter Name:
Passenger

Enter Number of Passengers:
4

Are there any privileged Person/s?:
None

Submit

Cancellation Page:



HomeBooking CounterSchedule

Enter PNR :

PNR Number

CANCEL

CONCLUSION

The website was built with our full focus and came to fruition to our satisfaction. We understand that it is not a completely functional Railway Management System, especially considering the Indian Railway System. There are various other facilities it requires to become a full fledged system, namely the functionality to keep a wait-list and keep it updated with every new booking and cancellation. We also intended to add a special admin login to access a special webpage to modify the databases, but were not able to do so due to security reasons.

In conclusion, the website has all the functionality we decided on and a few more that we were able to add along the way. We still would like to add new functionality to improve the system even further.

FUTURE WORK

- 1) The wait-list is a must have function we wish to include.
- 2) Many of our web pages are quite barren and require more functionality
- 3) The home page requires more functions such as an announcement area and notice board.
- 4) All pages should also have a footer that contains contact information of the organization using the site.

REFERENCES

We have taken the help of following websites reference to make our project successful.

- 1) <https://www.w3schools.com/nodejs/default.asp>
- 2) https://www.youtube.com/watch?v=q-lUgFwxjEM&list=PLRqwX-V7Uu6YxDKpFzf_2D84p0cyk4T7X&index=72
- 3) <http://10minbasics.com/nedb-basics/>
- 4) <https://www.youtube.com/watch?v=YE1mb7LZ9aI&list=RDCMUCTUvDLTW9meuDXWcbmISPdA&index=18>