

# Automated Railway Concession Form System

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*Abstract*— Living in Mumbai and not travelling by local train is just impossible. Most people's day start with train. Travelling in train is much easier and cheaper so almost all types of people use railway. Even students travel by train, who have their college or school at a far place. The Western Railway provides concession in monthly and quarterly pass for the students of schools and colleges, but should have age below 25. Many educational Institutes such as colleges and schools provide the students with concession form, issued by the Western Railway, Mumbai, to take benefit of the concession facility. The involved institutional authority has to perform complicated task of manually filling in the forms and even the verification of the student details is done manually, which is very tiring. Thus, there was an emerging need for automation of this manual system. Automated Railway Concession Form System is an application that can make this manual work automated. It can also provide the institute and the Railway with verified and perfect details of each student. Its main goal is to reduce the error caused by the manual process and make the process quick and easier.

**Key words:** Online Concession Form, FPDF class, Email Verification, Messaging Verification

## I. INTRODUCTION

Progress in web technologies has led to rapid increase of online systems for day-to-day tasks such as reservation, shopping, paying bills, etc. Automated Railway Concession Form System is a similar transformation where a tedious manual process is automated. To make use of the concession facility students have to get the concession form that the institute issues with their respective details filled on it. This includes their preferences as well as their personal details for the railway pass for which they need concession.

Online requesting for concession makes it easier for the end-users. They just have to fill a form online to send their request for a railway concession form. Each and every request that the end-user sends is received by the concerned Institutional authority who prints it on the concession form that is issued by the railway. The authorization and authentication is done for every end-user by the recommended online application which makes sure that the benefit of the concession provided by the Western Railways isn't exploited.

Looking beyond simplicity and comfort, this online application will also stop the misuse of the government given benefits.

## II. EXISTING SYSTEM

The Central and Western Railway Department sends the schools and colleges, concession form booklet; each booklet consisting of 50 forms. The students get their concession pass on this basis. This pass is valid for duration of a month or three months depending upon the preference given by the

student. Next time, after the concession pass is invalid, student has to get a new and fresh form. So, this process of giving and taking of concession forms continues throughout the year.

### A. Working

The handbook process of granting forms requires students to give their student profile to western railways. Then automatically western railways will fill all data of respective student who has applied for concession form. This process takes a lot of time.

A data of the student who has issued the form with respective form number is also required to be maintained by college. This report is accepted by railway authority. This report is made by students.

### B. Drawbacks of the Manual Process

The handbook process of filling the form brought in many problems and a lot of difficulties had to be faced by students like students had to stand in long queues for a lot of time that too during their college hours. A human error can be caused in manual process. No proper process records are maintained.

There are no full-proof records of forms issued, so any student can issue form any number of times, however according to railway rule no one can issue form second time before his/her current railway pass expires. This eventually leads to misuse of provision.

## III. PROPOSED SYSTEM

The website will provide a way for students to apply for their concession facility online through website which is based on PHP programming. This will solve all drawbacks of manual process, increase the efficiency and speed up all works to be completed. At college managements side a person can view the details of students who have applied for the concession form the respected authority will then print the form. The form will have a unique form number for every student. Also all the data will be at least once validated from the college database. For this purpose the college database are being retrieved directly. So this process also helps in maintaining integrity and consistency.

### A. User Interface

In user interface online application, our user is a student who wants to apply for the concession form. User, such as student, will have to first register with his/her college roll number and email-id. This will give assurance that only user being authority to use the facility are using the facility. The Email verification included in the registration form also checks whether the user who is registering is a valid end-user or not. After registration process is completed, and the user will click on submit button. He will receive a random password which is generated using programming function on his registered email-id. Then next thing the user will have

to do is enter the roll number as his username and the random password. Then finally after the student has logged in successfully he can complete the form by filling in all details and click on submit button. At first time user will only be required to give his class information and period for which he wants the pass, but when he applies for second time he will also have to give his details about his last travelling pass issued. Students can also know whether his/her form has printed yet or not. Student's respective accounts will also have a option to change password and a page which has all frequently asked questions.

### B. Client Interface

For this online application, the affected institutional authority who provides the concession form is the client. The client is the one who can view all the submitted forms and print them accordingly. For this purpose, a different login id and interface is given. All the submitted requests that are not printed are represented in a tabular format. For each request there is a selection radio button and a single print button. When print button is pressed, it generates a pdf file of the selected user. The pdf file has the necessary form details that are mapped properly at their positions as needed on the concession form.

Now the concession form has to be placed in the printer. And once the print button on pdf is clicked it prints the details on the form. Once the form is correctly printed, a confirmation page is opened, where the client has to confirm whether the details are correctly printed or not. If the client confirms it then that request will be removed from the table, and if the client declines then the pdf file is opened again for re-printing. Along with the form-associated tasks, the client also has been assigned different attributes to delete & update the saved details.

#### 1) Delete Feature:

- Delete a user's request.
- Delete all the printed request.
- Delete a registered user.

#### 2) Update Feature:

- Update user's Registered Email-Id.
- Update user's Personal Details.

### C. System Flow

The complete flow of the process is as follows. When student uses this system for the very first time, while registering, the verification is done through the institute's database. Once verification is completed, student can use the system. The validation of the information filled in the online form is done using the system and institute database, and only after that, the form is accepted. The client (institute authority) controls complete work flow. Printing of the forms, updating institute database, & updating student details and reflecting the changes in the system database. The railway's concession form is divided in two parts, one of these is issued to the user. The institute gives this part of the form to users, as and when they request. The other section is kept with the institute. When the complete booklet is used up, a report of this is created that the institute prints and submits it to railway authority along with the first part of the form. This report makes the record of all forms issued with the corresponding user information.

### D. Validations

For each input submitted by user/student, validation is needed to be performed. No false format of details can be submitted in the input section of different forms. Security and protection against web-server attacks like SQL injection is done. Validations with respect to the rules instructed by the Western Railway, Mumbai are done. The path for which the railway-pass concession is issued, depends where the user stays. So, the user is not permitted to issue concession for any different path.

## IV. ADVANTAGES

Automation of the manual process has the basic advantages of reduce in the manual effort, proper validations and verifications, perfection of the data processing. However, this online application gives a platform where the activities that were not possible before could be easily and efficiently performed.

- Form data can now be properly and completely filled.
- Many data of the users are fetched from the institute issued database. In case of any alteration needed, the user has to notify the institute. So, the Institute database is kept updated.
- False use of forms has been completely eliminated.
- Once the student's form is printed, this system doesn't allow applying of any more request with respect to the duration of the railway-pass that the student has selected. So, no forms are wasted.
- For any false input, appropriate error message is displayed.
- As well as, the system is user-friendly for both user and the client.

## V. CONCLUSION

This system, in addition to lessening the work load on the institute, it also fixes any false data about the users that the institution may have. It is a benefit for the users' whose important time and energy is preserved, for the affected educational college's authority whose workload is immensely reduced and for the government at huge, whose services are secured from misuse.

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