



**A Project Report**  
**On**  
**Bus Breakdown Management**

**Group Members**

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**Subject**  
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# Problem Statement

To develop a database application that will handle the bus breakdown scenario. The application has 2 stakeholders ie. the manager and the conductor.

## **Conductor :**

1. Conductor has to login to use the system.
2. As soon as conductor logs in , he gets a schedule of all conductors if he logged in at a time when there is no schedule assigned for him.
3. Conductor has no authentication to view other breakdowns.
4. When a schedule is assigned to the conductor, he gets the report breakdown option in which if breakdown occurs , he can immediately report breakdown .
5. As bus gets reached , conductor gets in the new bus and resumes his schedule.

## **Manager :**

1. Manager will login first to use the bus breakdown system.
2. Manager will add the employees and buses working in the system and assign the schedule for every bus and conductor .
3. When a breakdown is reported by the conductor, manager decides which bus to send .
4. As soon as the bus is reached , manager gets a message from conductor .
5. Manager has all the details of the breakdown and according to that he decides what action should be taken for the bus.
6. Manager has analysis graphs of all the breakdowns.

# Project Scope

The Project has a greater scope for implementation as there is no automated mechanism for bus breakdown management in Pune municipal transport. The current system is time consuming and doesn't use any computerised system to keep track of all the breakdowns. The extended version of this project can be used to overcome the above failure that exists in the bus transport system across India. The project is not only limited to bus transport system in the city of Pune, but it is scalable its improved version or updated version can be applied to any city which currently goes through the same situation as the Pune bus transport.

The current system designed has user as Conductor and Manager, an improved version of the project we can extend the after breakdown functionalities to the user. Hence a large number of real world problems of breakdown by passenger can be solved. The current system requires manual scheduling by the manager. The current system has very limited depots and stop, but the project is scalable.

# Project Assumptions

- Manager is always logged into the system to be able to handle current breakdowns.
- The conductor has a device from which he can login to report the breakdown and view breakdown status.
- There are adequate buses available to send as replacement for breakdown, either at the nearest depot or any other depot.
- The broken down bus will be repaired overnight and will resume its schedule the next day.

# Project Limitations

PREMISE	DESCRIPTION
Bus report back next day	The Bus which has been broken down will report the next day and will follow the schedule. The Manager will have to manually update the schedule if bus is not repaired.
Limited options	The Conductor has limited functionality ,the function of conductor is to report breakdown and report whether the bus has reached.
Manager has no authority on Broken buses	Manager has no say on broken bus as he just assigns the new bus. The broken bus is not handled by the manger. It is assumed that the mechanic has been assigned to the broken bus and there has been no further failure.
Limited depots	The city of Pune has Number of depots. The project is limited to just four depots but it can be extended.
No Global Positioning System	The System is highly dependent on the Conductor for the position of the Bus. The system does not use any system to automatically locate the bus.
Sending of replacement	The act of sending the replacement bus is left onto the respective depot manager.

# Project Requirements

## ➤ **Software requirements**

- ☐ XAMPP Web servers
- ☐ MongoDB - mongo,mongod
- ☐ Web Browser

## ➤ **Hardware requirements**

- ☐ Workstation

# Graphical User Interfaces

- **Login Page :**

The login page involves logging into conductor or manager account.

The conductor/manager homepage is visible once the person logs into the system.

- **Conductor Home Page :**

When conductor logs in his account , the complete schedule is displayed if not assigned for the current time else he gets the option of report breakdown by which he can reports breakdown when occurred.

- **Manager Home Page :**

When manager logs in his account , he gets the table for the list of breakdowns occurred on that particular day and selects a particular option to attend a breakdown .

- **Conductor Breakdown Report:**

Conductor will select the nearest stop to which replacement has to be sent and the reason for the breakdown.

- **Manager Breakdown:**

Manager will select a replacement bus to send, and can view the status of breakdowns.

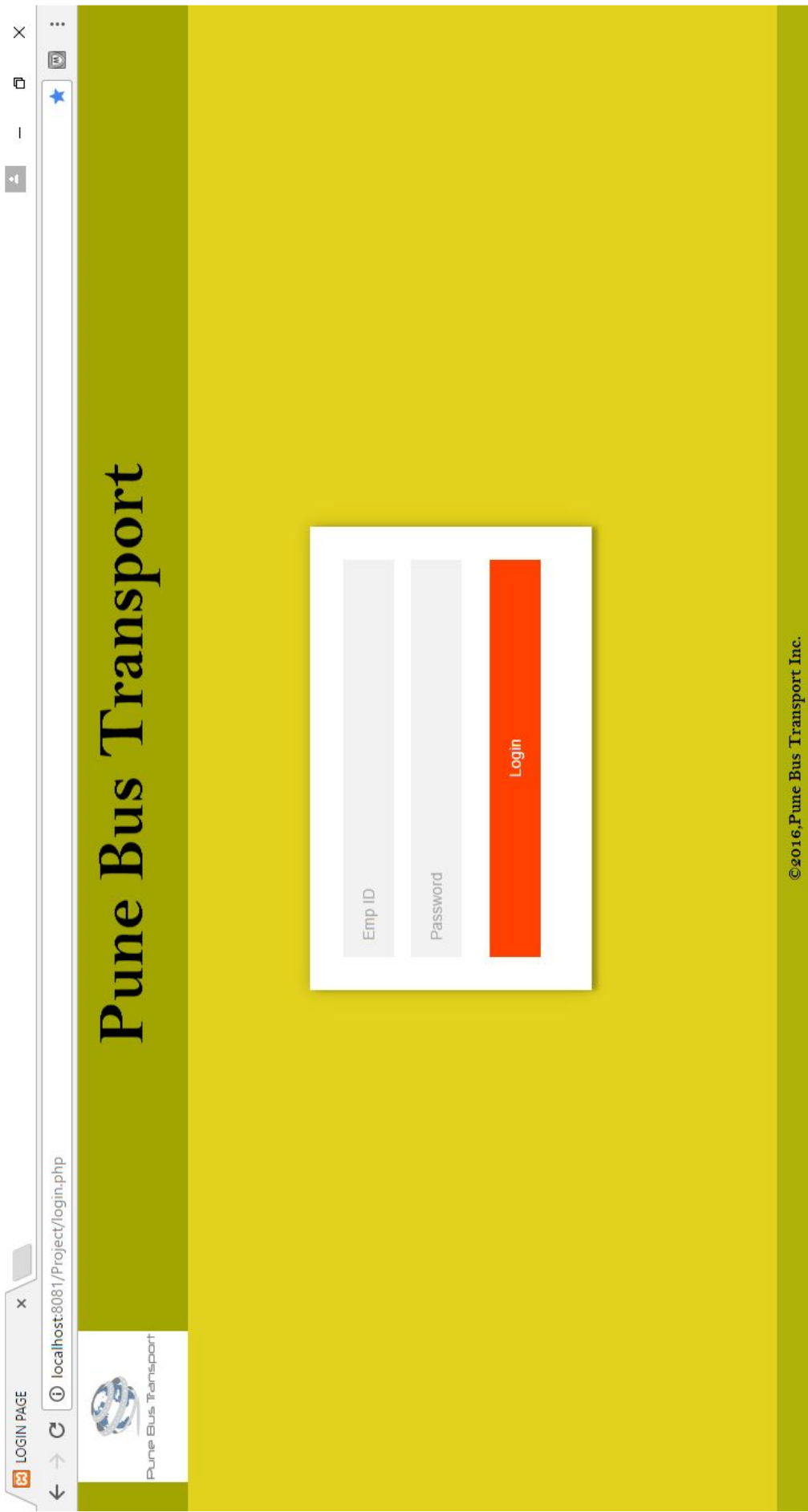
- **Analysis:**

Manager can view analysis graphs of breakdowns.

# Test Case Design

Test ID	Description	Expected Result	Actual Result
1	User Login	Main page of respective user should be displayed after successful authentication	Main page of respective user is displayed after successful authentication
2	Conductor Reports Breakdown	The Conductor will be able to report a breakdown if he is allocated a bus at that time. All information is inserted in database.	The Conductor is able to report a breakdown if he is allocated a bus at that time and breakdown information is inserted in database.
3	Manager Views Current Breakdowns	All current breakdown details in the database will be visible to the manager.	The manager can view all the current breakdown details.
4	Manager Sends Spare Bus	Manager will be able to send a spare bus to newly reported breakdowns.	A spare bus can be sent by the manager to newly reported breakdowns.
5	Viewing Status of Breakdown	Conductor and Manager should be able to view the current status of breakdown.	Conductor and Manager can view the current status of breakdown.





# Pune Bus Transport

Emp ID


Password

Login

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Conductor

localhost:8081/Project/conductor.php



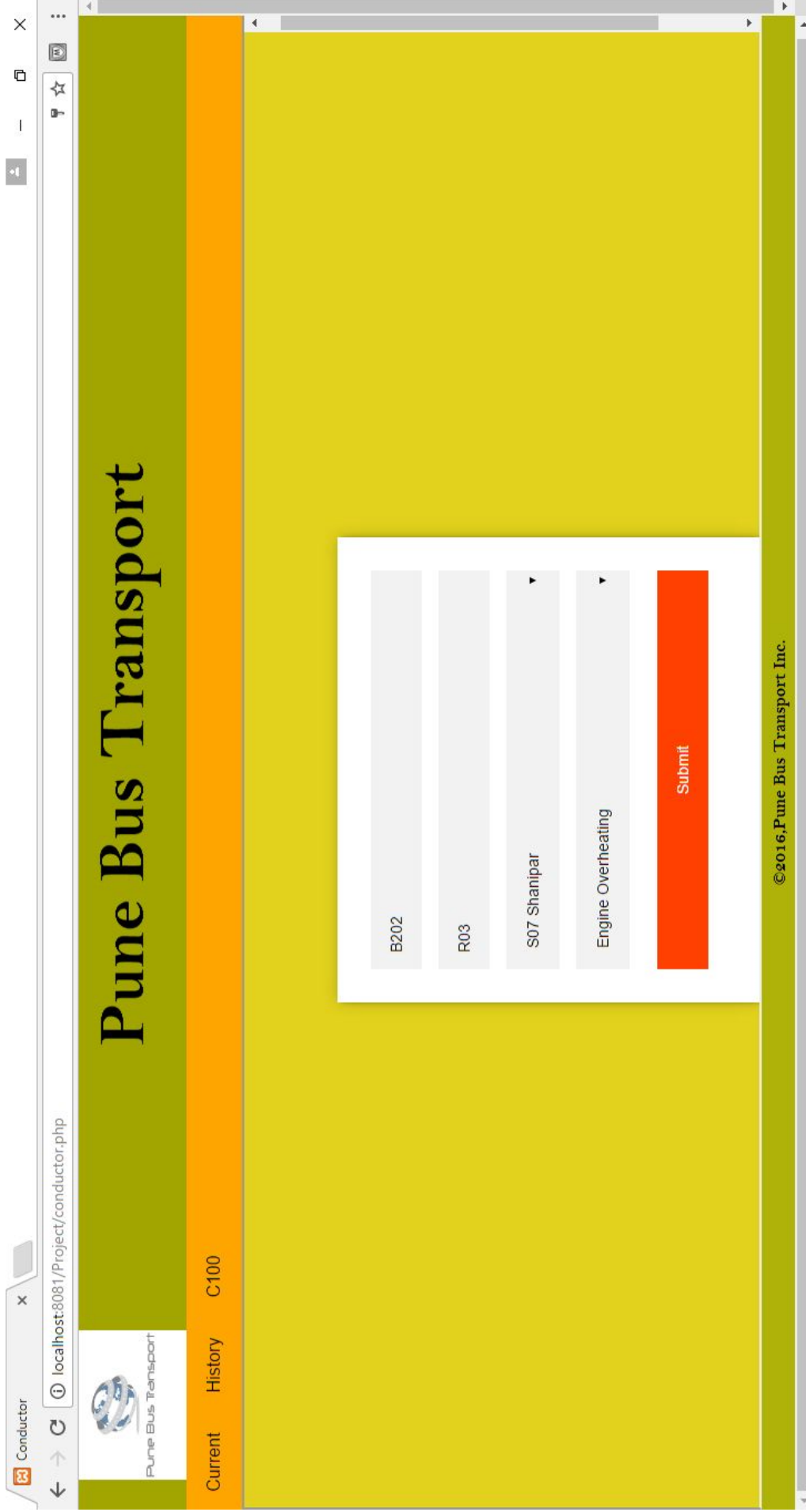
Pune Bus Transport

CurrentHistoryC100

# Pune Bus Transport

Report Breakdown


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Managerx

localhost:8081/Project/manager.php



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HomeCurrentAnalysisHistoryM100

# Pune Bus Transport

Welcome Manager

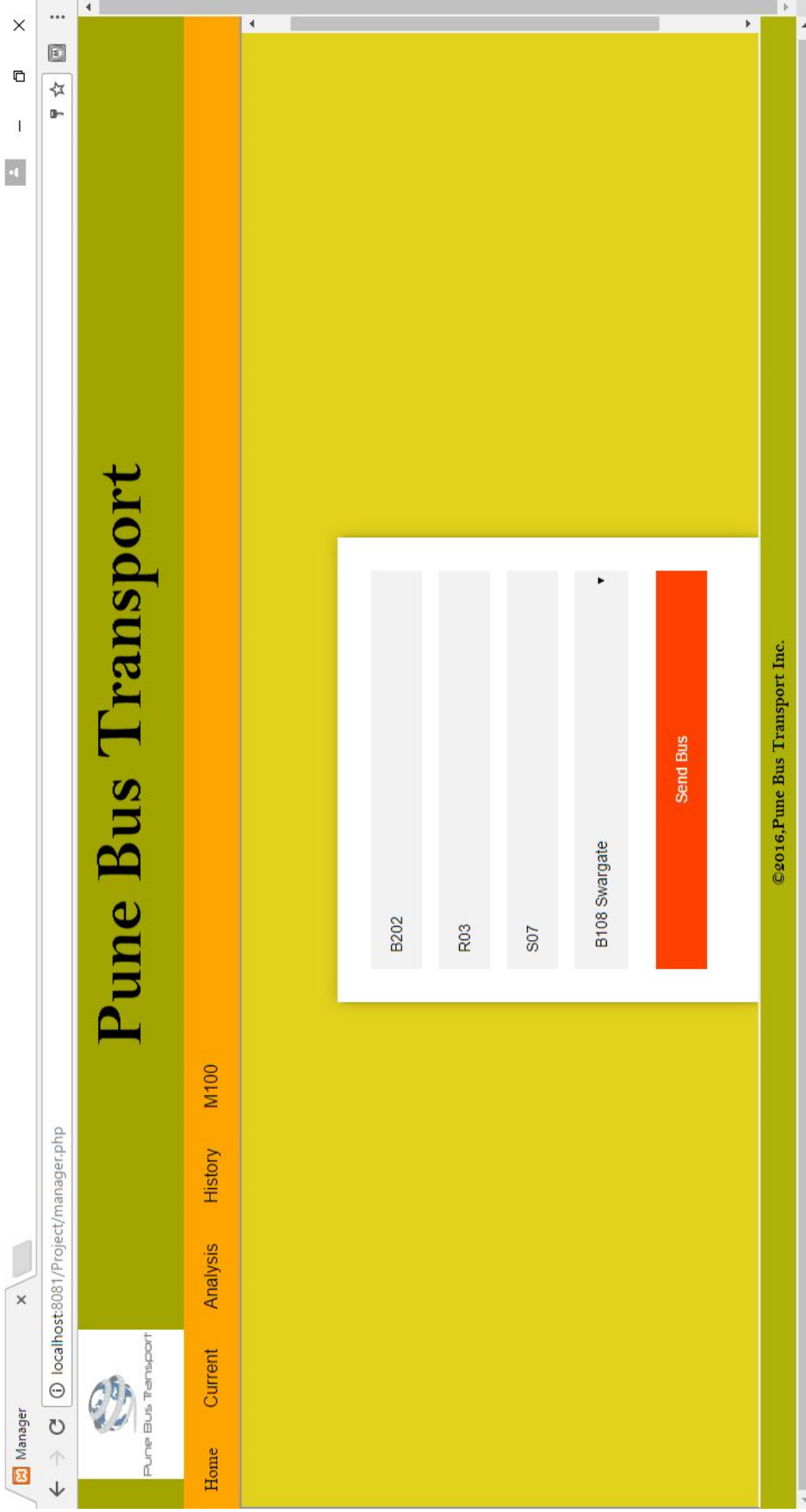
New Breakdowns

Bus No.	Route No.	Nearest Stop	Time Reported
B202	R03	S07	18:00

Breakdowns with Bus Reached

Bus No.	Route No.	Time Reported	Bus Sent
B104	R04	11:00	B113


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Manager

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HomeCurrentAnalysisHistoryM100

# Pune Bus Transport

Bus B108 has been sent

Bus No.	B202
Route No.	R03
Counductor ID	C 100
Nearest Stop	S07 Shanipar
Sent Bus	B108 Swargate
Status	1

View All Breakdowns

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Manager

localhost:8081/Project/manager.php



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HomeCurrentAnalysisHistoryM100

# Pune Bus Transport

Welcome Manager

Breakdowns with Bus Reached

Bus No.	Route No.	Time Reported	Bus Sent
B104	R04	11:00	B113
B202	R03	18:00	B108

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Manager

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HomeCurrentAnalysisHistoryM100

# Pune Bus Transport

Bus No.	Route No.	Conductor	Nearest Stop	Reason	Time	Date	Status
B101	R01	C101	S02	Engine Failure	14:02	2016/10/17	2
B104	R04	C105	S15	Engine Failure	12:00	2016/10/17	2
B202	R03	C100	S08	Tyre Damage	17:20	2016/10/18	2
B101	R01	C101	S02	Engine Failure	14:42	2016/10/18	2
B111	R02	C104	S05	Tyre Damage	11:10	2016/10/19	2
B102	R02	C102	S05	Tyre Damage	10:05	2016/10/19	2
B106	R03	C107	S06	Tyre Damage	10:15	2016/10/19	2
B103	R03	C103	S11	Gear Problem	11:15	2016/10/21	2
B102	R02	C102	S05	Other	13:07	2016/10/21	2
B111	R02	C104	S03	Tyre Damage	13:09	2016/10/21	2

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