

## ANDROID BASED SMART CITY NAGPUR APP

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### ABSTRACT

*Abstract— The day to day operations and functioning of the city is taken care by the NMC. The important responsibility of Nagpur Municipal Corporation to manage and solve the complaints that the residents of city might face. The citizens visit NMC office and report their problem to the municipal corporation. But it takes lots of paper work and time because citizens have to visit the ward office and report problem faced by them. There are buses available for passengers travelling in the city, but not many passengers have complete information about buses running between the routes. The modern internet provide tourist with huge possibilities for searching interesting information about tourist spot, but it is time consuming as tourist has to go through large amount of information. The world is moving towards digitization, so it is necessary for NMC to improve their offered infrastructure by using technology. The Smart City Nagpur App achieves the motto of digitization by proving the platform which enables the citizens to lodge complaints anytime, anywhere. The app also provides the details about buses running between various routes and tourist places on the fingertips of citizens.*

*Keywords- smart city, complaint, transport, tourism.*

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### 1.INTRODUCTION

There are several departments within the city government to handle different aspects of the city upkeep. It is important for the city government to know about the problems as and when they arrive in to existence of the city. So that the problems can be solved quickly and efficiently. For easy handling of the problems the complaints are categorized according to the department. Any complaints belonging to or originated is only handled by the officers of that department. Complaint resolution gets delayed significantly if the complaint is routed to a different department other than the corresponding department. Efficient functioning of all the functionality and services in the area under the city government depends on the citizen participation. Once a complaint is registered by the citizens then appropriate departmental authority is notified about the complaint for action. The citizen is also notified about the status of the complaint.

The app provides category classification of tourist spots in Nagpur. Detailed information about attraction contains an image that is associated with this attraction and its description. The app also provides a helpline tab it provides the necessary link and helpline number making it easier for tourist. This feature of app brings together all city services; immediate with tourist interest which fosters the commercial sector and generate value to citizens.

Android platform is an open source development which is probably the most feasible and a user friendly approach. This approach of android is being used to provide a digital platform for finding bus between source and destination. The applications will you detailed information about the bus such as bus number, timing, bus driver and conductor name between source and destination to user.

All the features discussed above are provided in a single app. Thus reducing the overhead of maintaining separate app for each of the features. Our lives will become much reliable and enjoyable because of smart city Nagpur application with their functional tactics.

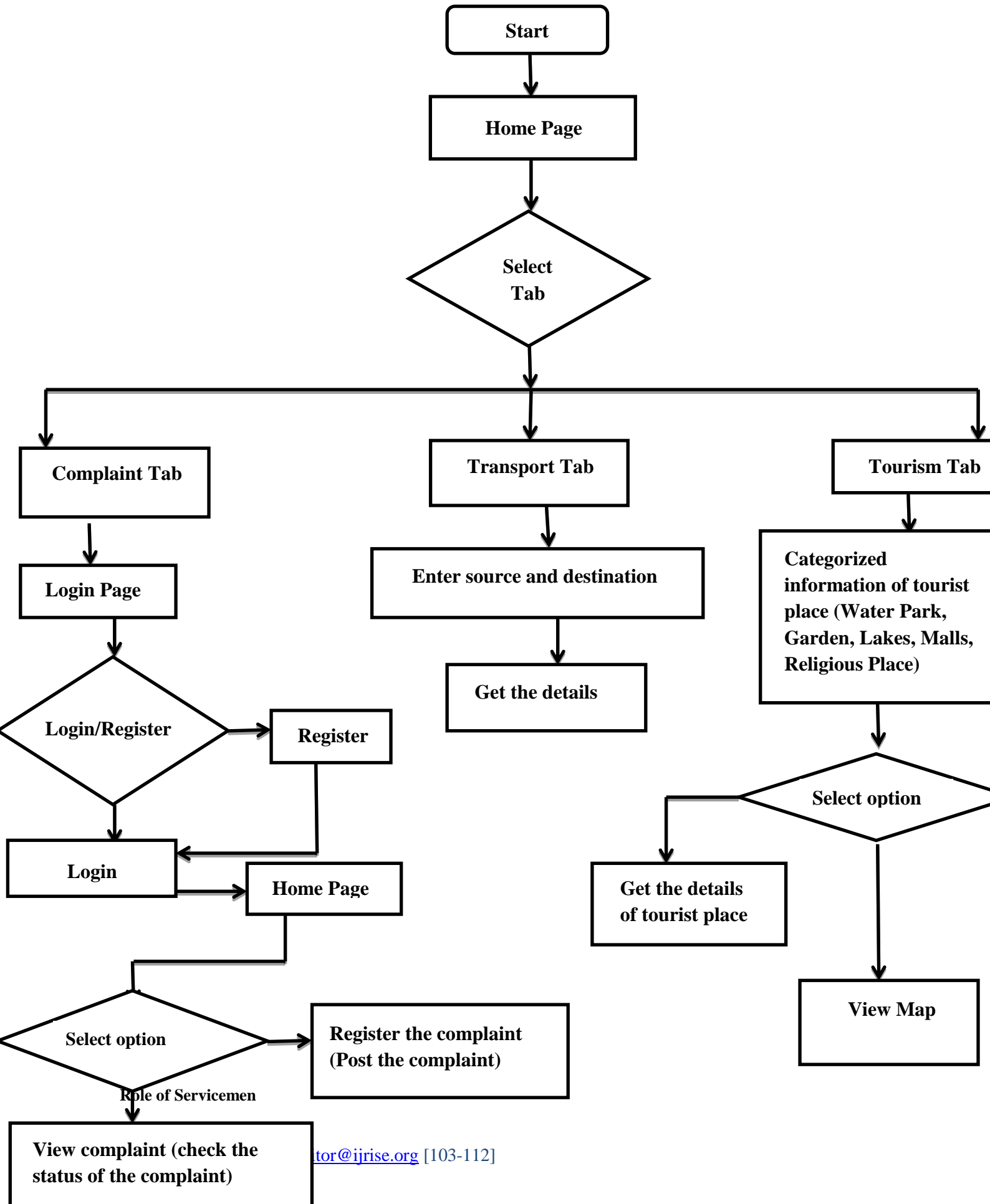
## **2. METHODOLOGY**

Android platform is an open source development which is probably the most feasible and a user friendly approach. Android applications have become a trend these days. Our lives have become much reliable and enjoyable because of some famous applications with their functional tactics. So we have used android for the development of our application. The smart city app provides the interface providing a camera which helps clicking a picture of any issues that people are watching and upload this photo along with that complaint. For uploading the image to the server we have used PHP in the backend. For the connection of mobile app with database we have used JDBC (Java Database Connectivity).The app and dashboard provides registration form. Basically, there are three users of our app: user, servicemen (Which handles the complaint), Admin.

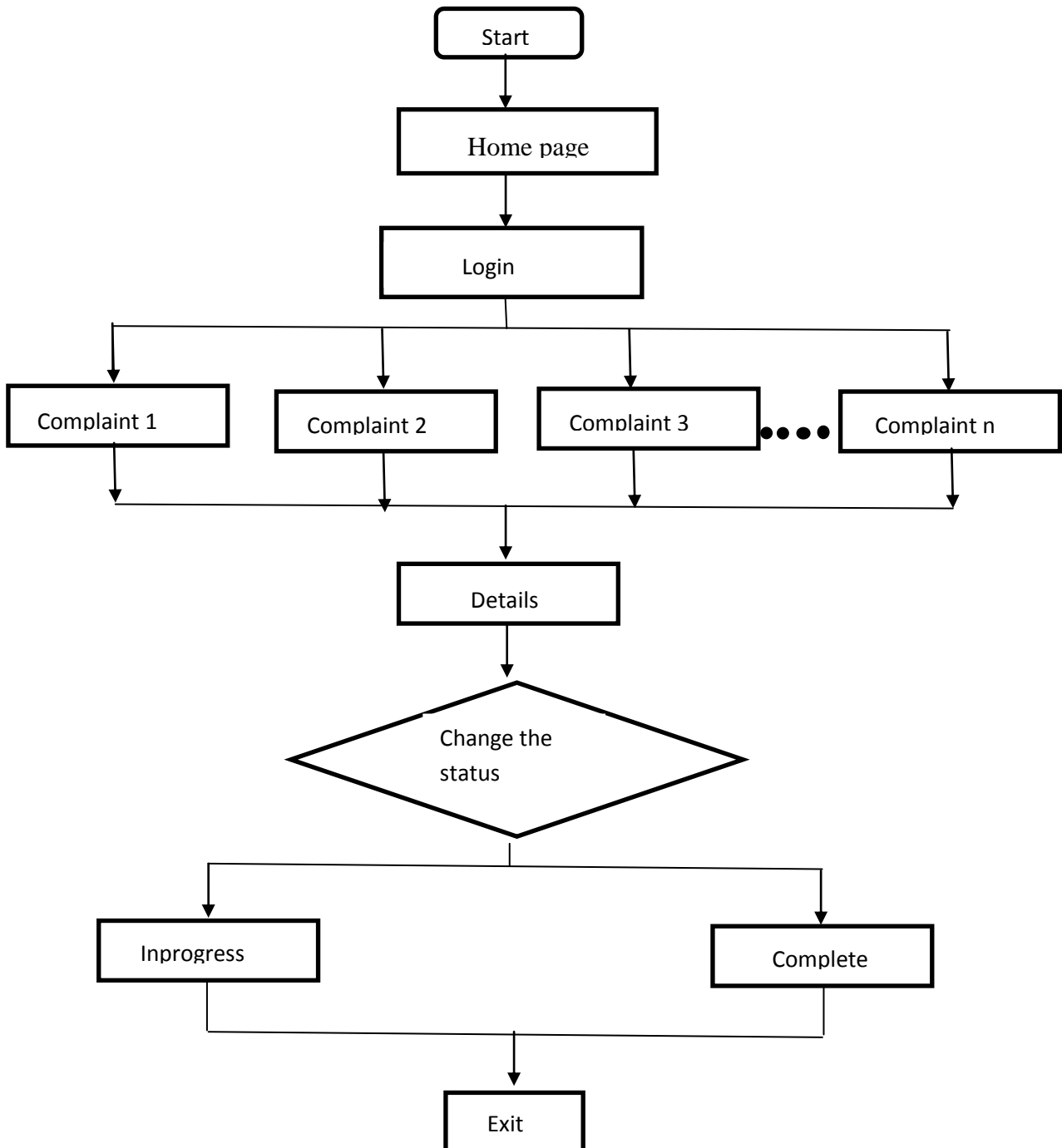
## **3.WORKING**

### **Role of user**

The app provides following three features to the user: Complaint tab, transport tab, tourism tab. If a user want to lodge a complaint then in such case first he need to register and then he can use this facility of app. The complaint tab provides with two options: lodge complaint where user post their complaint and second option is view complaint by using this facility he can see the status of the complaint posted by him. Second feature is transport tab where user can search the bus running between source and destination. The tourism feature provides categorized information about tourist place making it easier for tourist to decide.



The serviceman is the one which handles the complaint posted by the citizens. The complaint received by the serviceman is according to the department. Once he login to the app, he gets a list of complaints. On clicking, the serviceman gets entire detail about the complaint and now he can change the status of the complaint.



**Fig2: Role of servicemen**

### Role of Admin

The admin need to login for using the dashboard. The admin has following privileges adding/register the servicemen, view complaint according to the department, also get the report through result analysis.

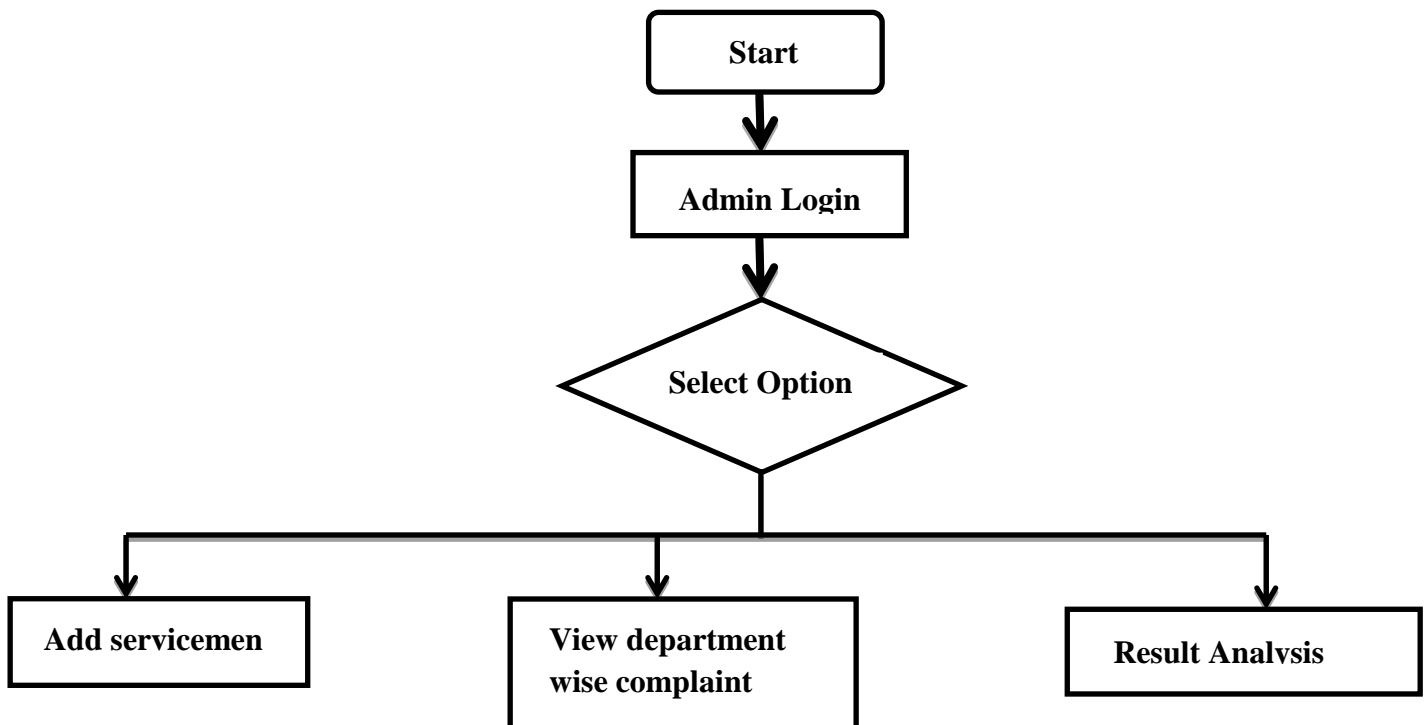
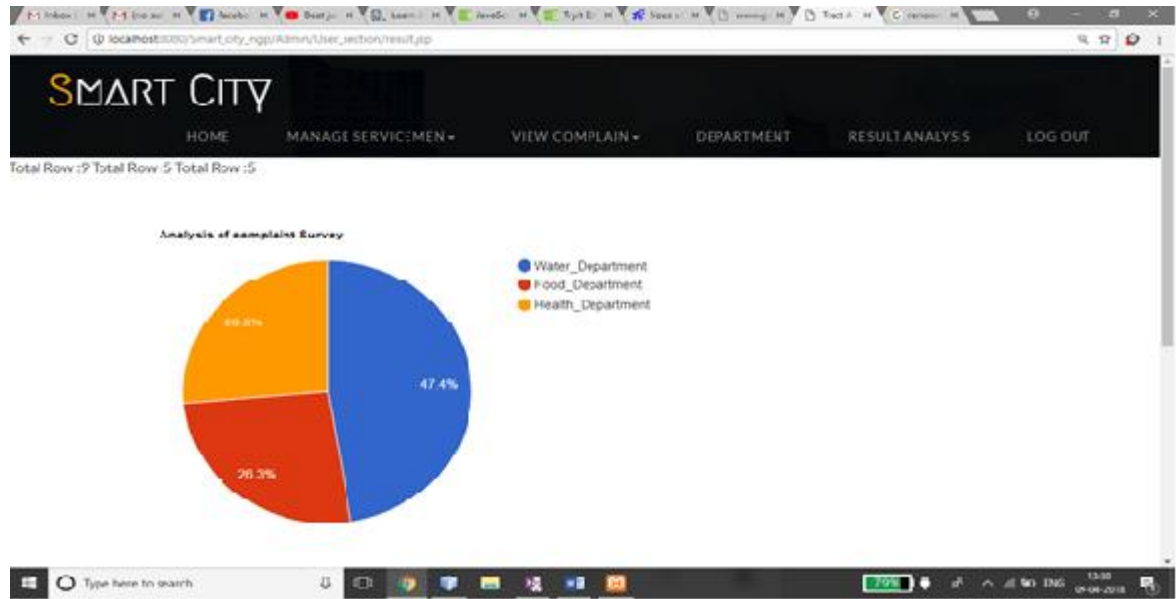


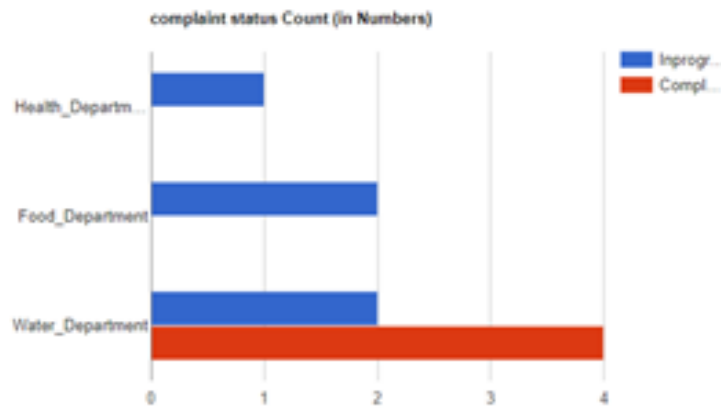
Fig 3: Role of Admin

#### 4.RESULT



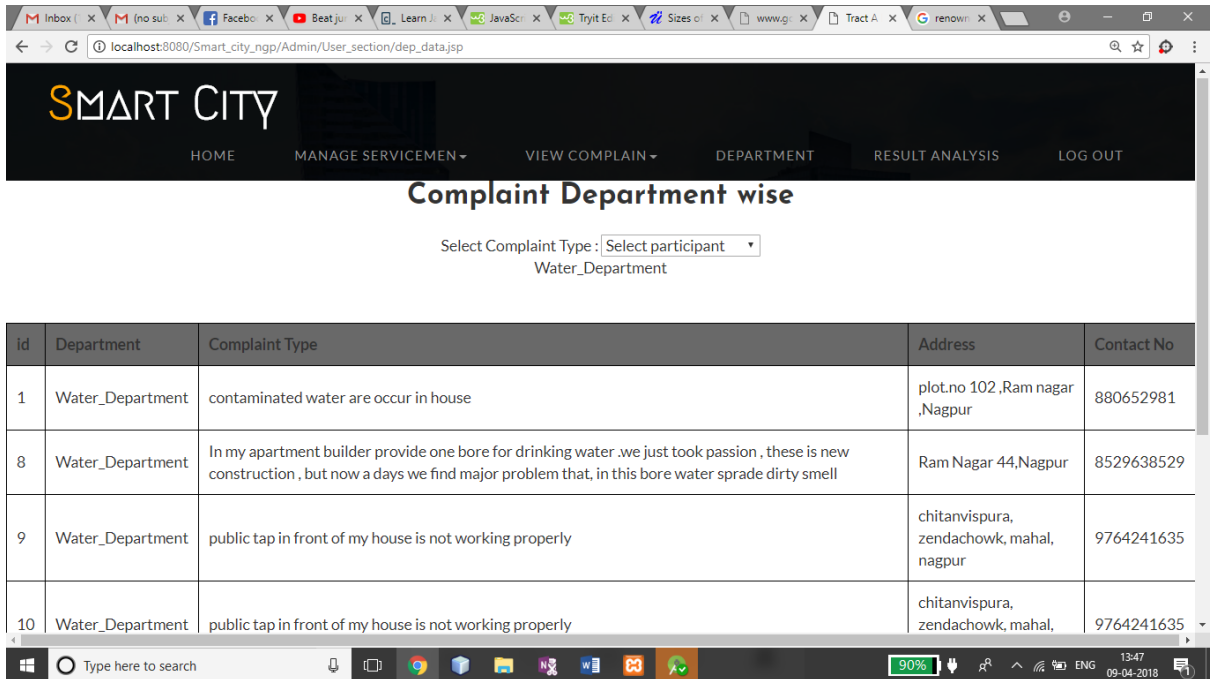
**Fig4: Result analysis of complaints**

The above result analysis represents the number of complaints in each department in the form of pie chart.



**Fig 5: Result analysis of complaint**

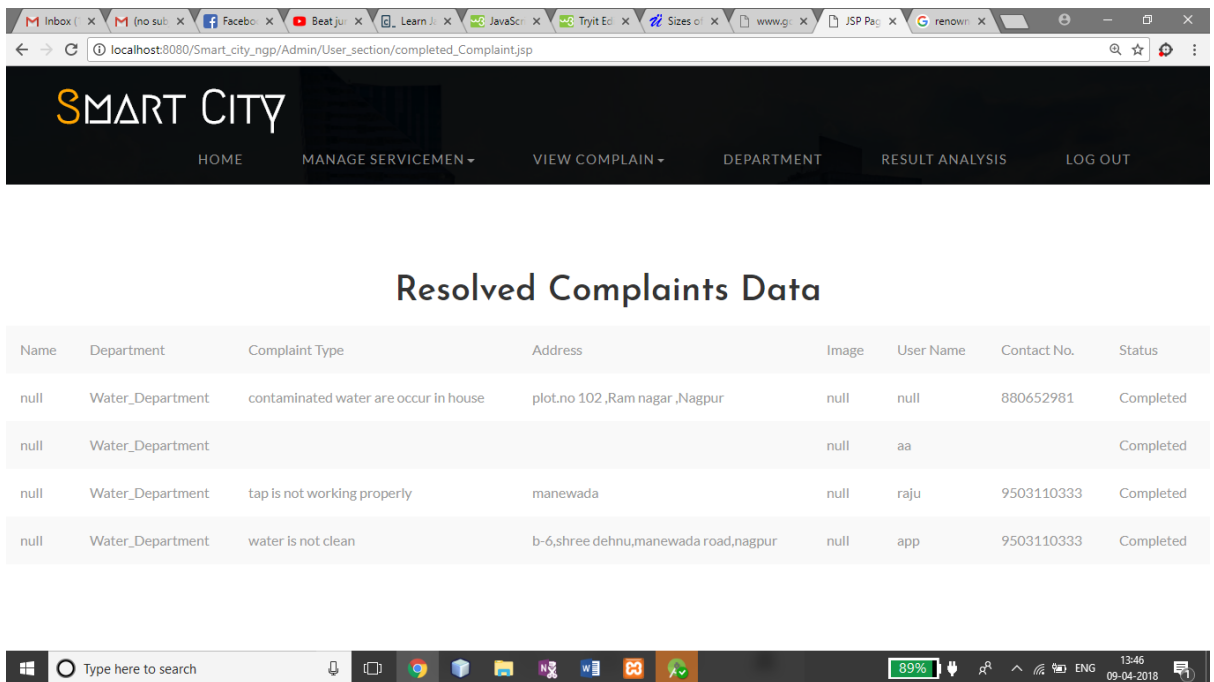
The above result analysis represents the status of complaints in each department in the form of bar graph.



| id | Department       | Complaint Type   | Address                                  | Contact No |
|----|------------------|--|--|------------|
| 1  | Water_Department | contaminated water are occur in house  | plot.no 102 ,Ram nagar ,Nagpur           | 880652981  |
| 8  | Water_Department | In my apartment builder provide one bore for drinking water .we just took passion , these is new construction , but now a days we find major problem that, in this bore water sprade dirty smell | Ram Nagar 44,Nagpur                      | 8529638529 |
| 9  | Water_Department | public tap in front of my house is not working properly  | chitanvispura, zendachowk, mahal, nagpur | 9764241635 |
| 10 | Water_Department | public tap in front of my house is not working properly  | chitanvispura, zendachowk, mahal,        | 9764241635 |

**Fig 6: Department wise complaint**

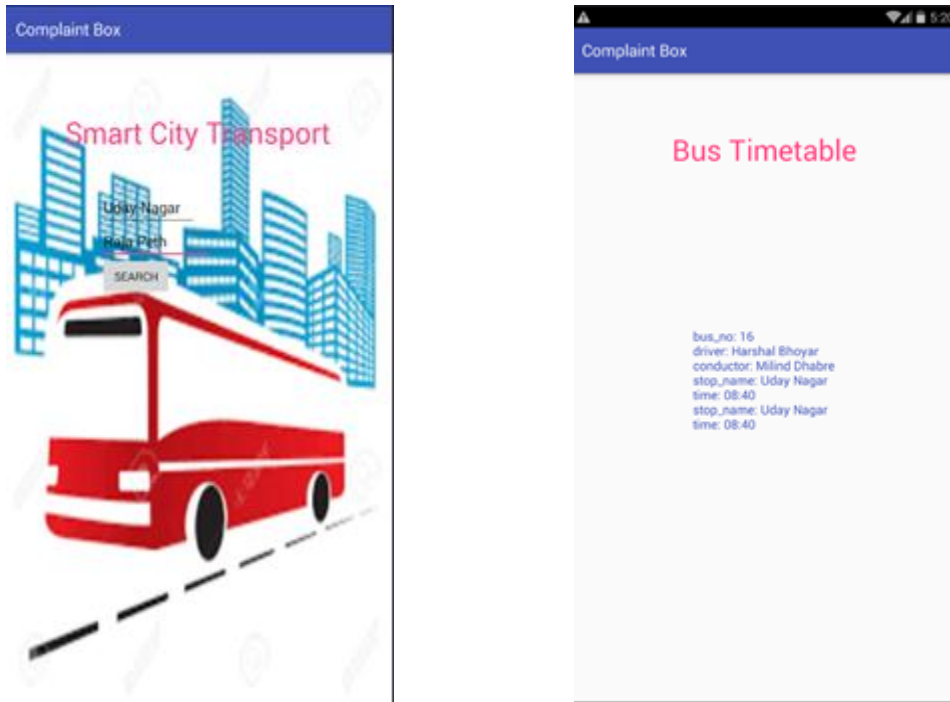
The following feature of dashboard allows admin to see complaints according to the department wise.



| Name | Department       | Complaint Type                        | Address                              | Image | User Name | Contact No. | Status    |
|------|------------------|---------------------------------------|--------------------------------------|-------|-----------|-------------|-----------|
| null | Water_Department | contaminated water are occur in house | plot.no 102 ,Ram nagar ,Nagpur       | null  | null      | 880652981   | Completed |
| null | Water_Department |                                       |                                      | null  | aa        |             | Completed |
| null | Water_Department | tap is not working properly           | manewada                             | null  | raju      | 9503110333  | Completed |
| null | Water_Department | water is not clean                    | b-6,shree dehnu,manewada road,nagpur | null  | app       | 9503110333  | Completed |

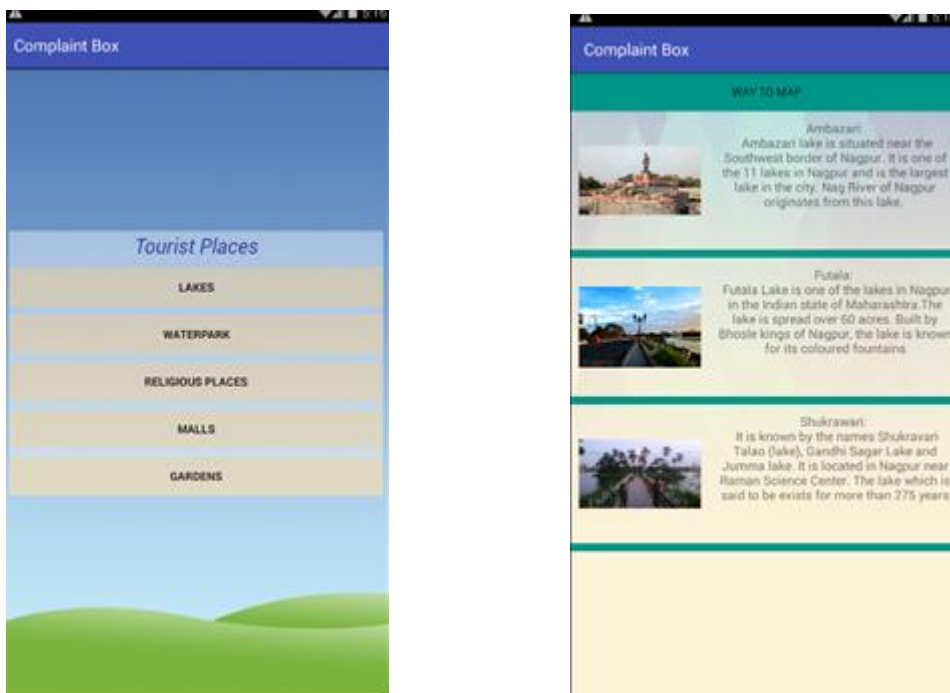
**Fig 7: Resolved complaint data**

The following feature of dashboard allows admin to see complaints which are resolved.



**Fig 8: Search result of bus**

The user needs to enter the source and destination, which gives him the result of bus accordingly.



**Fig 9: Result of tourism tab**

The tourism tab provides the details of tourist spot



## 5. CONCLUSION

This system will give very efficient and time saving way to lodge the complaint about daily problems in the city. It is also reliable for the NMC authorities to get the exact details of the problem occurred because of photograph. So they can handle the problem in simple way with needed man power. Because of the mobile application citizens will not get any problems to lodge their complaints, they do not personally go to the MC office and lodge the complaint. In this modern era you require a system that gives you a digital platform to provide details about tourist places and bus running between source and destination. The best way to provide digital platform is mobile application. Our app provides the facility of lodging the complaint, searching bus and tourist attraction in one single app.

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## REFERENCES

1. Prashant Ghadge, Sagar Yadav, Swarel Jadhav, Truptej Patil, "SmartCity (Karad) Android Application", International Research Journal of Engineering and Technology(IRJET), Volume: 03 Issue: 05 May 2016, Page No.:2699-2703, e-ISSN:2395-0056 p-ISSN:2395-0072.
2. Dhaval Gherwada, Vipul Shah, Deep Shah, Prof.Harsh N.Bhor, "Mobile Application Interface to Register Citizen Complaint", International Journal for Research in Engineering Application & Management (IJREAM), Volume:01, Issue: 03 June 2015, Page No.:1-5.
3. Alexander Smirnow, Alexey Kashevnik, Nikolay Shilov, Nikolay Teslya, Anto Shabaev, "Mobile Application for Guiding Tourist Activities: Tourist Assistant-TAIS", Proceeding of the 16<sup>th</sup> Conference of Trust Association, Page No.:94-100, ISSN: 2305-7254.
4. Amol Jaybhaye, Jagdish Kate, Ajinkya Joshi, Viraj Patil, "Transportaion Android Application for Pune City", Miltidisciplinary Journal of Research in Engineering and Technology, Volume:03, Issue:2, Page No: 953-957, ISSN: 2348-6

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