

# PERFORMANCE & ANALYSIS AUTOMATION OF MEDICAL REIMBURSEMENT FOR BSNL

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## ABSTRACT

The fundamental goal of this paper is to automate the Medical Reimbursement strategies for BSNL with the Seamless Integration of procedure. This delineates the Medical Reimbursement components of the association. Our essential objective is to plan the device in a manner that the End-User and the Administrator need not battle to search for any data he/she needs. The Automation of Medical Reimbursement System has been utilized to beat the issues brought about by the present manual preparing. In the proposed framework, the information sustained by the workers is kept in a secured database which thus has made the recuperation of the information more straightforward. Then again it likewise gives attention to the workers about the way in which it can be effortlessly associated with the database in the back end furthermore altered. Further, information reflection is done to guarantee that fitting coding at the server side is kept a long way from the ordinary web clients. Our Application is adaptable for different upgrades and improvements in not so distant future. All in all, the proposed framework has been utilized to give an undeniable support of the client and the head in their own particular terms.

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## KEY WORDS

Medical Reimbursement,  
Seamless Integration, Data  
Abstraction.

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## INTRODUCTION

The fundamental reason for this paper is to computerize the handling of the Medical bills by the representatives for their Reimbursement. In this task we have taken a shot at making a Medical bill preparing web application with the goal that it ought to be an effectively justifiable application. The application that we have grown in this is for the representatives of Bharat Sanchar Nigam Limited (BSNL). Any web application without the cutting edge methodology is futile. It is additionally intended to convey substance to client's requests, along these lines lessening the clients' work significantly expanding solace and effectiveness. The substance of the web application are chosen and gathered organized appropriately such that any non-specialized and new client can scan through the data he/she needs. Bharat Sanchar Nigam Limited (curtailed BSNL) is an Indian state-possessed information transfers organization headquartered in New Delhi, India.

It was consolidated on 15 September 2000. It assumed control over the matter of giving of telecom administrations and system administration from the recent Central Government Departments of Telecom Services (DTS) and Telecom Operations (DTO), with impact from 1 October 2000 on going concern premise. It is the biggest supplier of settled telephony and fourth biggest telephony supplier in India, and is additionally a supplier of broadband administrations. Be that as it may, as of late the organization's income and piece of the pie dove into overwhelming misfortunes because of exceptional rivalry in the Indian information transfers sector. BSNL is India's most established and biggest correspondence administration supplier (CSP). It had a client base of 117 million as of Jan 2014. It has foot shaped impressions all through India with the exception of the metropolitan urban communities of Mumbai and New Delhi, which are overseen by Mahanagar Telephone Nigam (MTNL).

## MATERIALS AND METHODS

### LITERATURE SURVEY

BSNL is an extremely enormous system which is overseen by a gathering of individuals. Preparing and sorting out the entire system is a dreary procedure. In BSNL every single Medical case are handled physically, which devours part of time and staff assets. At first, the Employee needs to fill the Application shape and submit it to the individual officer alongside the Medical Bills for preparing. The officer thus sits tight for a chunk of such claims to get gathered and afterward passes the gathered cases to the following level of preparing. The structure is finally gone to the Account officer who checks the subtle elements for sum freedom. At last, the case is authorized which might take couple of months or more.

### PROPOSED SYSTEM

The Proposed framework has been worked for the advantage of BSNL to beat the troubles confronted in manual handling of Medical Reimbursement via robotizing the whole process as a Web based application. In Proposed system [1-4], at the client level the client sign in through their one of a kind id's to fill in the Online Reimbursement shape and submit it and gets their status redesigned occasionally through email alarms. At the administrator level, the submitted structure is gotten by the separate authorities in different levels, for example, Dispatch, Receive, Amount Clearance and Sanction. Along these lines, the reengineered framework will indicate most extreme capacity and similarity to be changed over to a client justifiable organization [5-8].

### SYSTEM DESIGN

The User applies for therapeutic repayment by filling the online application structure. The structure submitted is put away in the server and after that gets redesigned into the database. At the Admin level, the dispatcher dispatches the application structure to the collector.

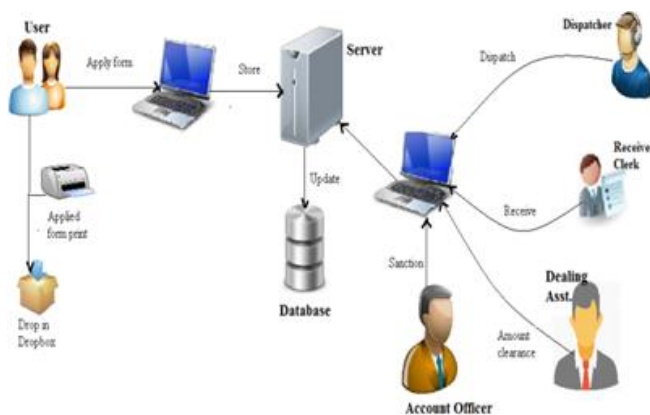


Fig. 1: System Architecture

The recipient on confirming it passes it to the managing collaborator for sum leeway. At last, the record officer authorizes the case of the client and the client is insinuated about the same through email correspondence appeared in [Figure 1].

### DATA FLOW DIAGRAM

Date Flow Diagram (DFD) is a method for demonstrating a framework's abnormal state point of interest by indicating the sequence of transformations. DFD uncovers connections among and between the different segments in a project or framework. DFD comprises of four noteworthy segments: Entities, Processes, Data stores and Data streams

### LEVEL 0

Level 0 Data stream graph will speak to the info, process and the yield of the framework. A DFD might seem to be like a stream diagram. Be that as it may, there is a noteworthy distinction with the information stream graph. The bolts in DFDs demonstrate that there is a stream of information between the two parts and not that the segment is sending the information that should be executed in the accompanying segment appeared in [Figure -2].



Fig. 2: Level 0 DFD

A segment in DFD may not proceed with execution when sending information and amid execution of the segment getting the information. The segment sending information can send numerous arrangements of information along a few associations. Indeed, a DFD hub can be a segment that never closes.

**LEVEL 1**

The Level 1 DFD indicates how the framework is separated into sub-frameworks (forms), each of which manages one or a greater amount of the information streams to or from an outer operators, and which together give the majority of the usefulness of the framework all in all. It likewise distinguishes interior information stores that should be available all together for the framework to carry out its employment, and demonstrates the stream of information between the different parts of the framework appeared in [Figure -3]

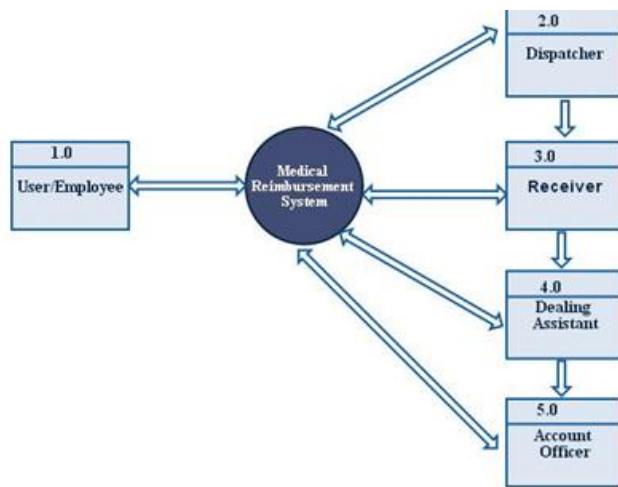


Figure: 3 Level 1 DFD

**LEVEL 2**

In the level 2 DFD, there is number of intermediate nodes which are used in each module is elaborated and the exact flow of the processing system is shown in detailed structure shown in [Figure -4].

**UML DESIGN**

Unified Modeling language (UML) is a standardized modeling language enabling builders to specify, visualize, construct and document artifacts of a software procedure. Therefore, UML makes these artifacts scalable, relaxed and effective in execution. UML is an main aspect concerned in object-oriented software progress. It uses photo notation to create visible models of software systems.

**USE CASE DIAGRAM**

The utilization case graph is alert in nature there ought to be some inward or outside elements for making the communication. These inside and outer operators are known as on-screen characters. So utilize case outlines are comprises of performing artists, use cases and their connections. The outline is utilized to display the framework/subsystem of an application. A solitary use case chart catches a specific usefulness of a framework. So to display the whole framework quantities of utilization case graphs are utilized appeared as a part of [Figure 5].

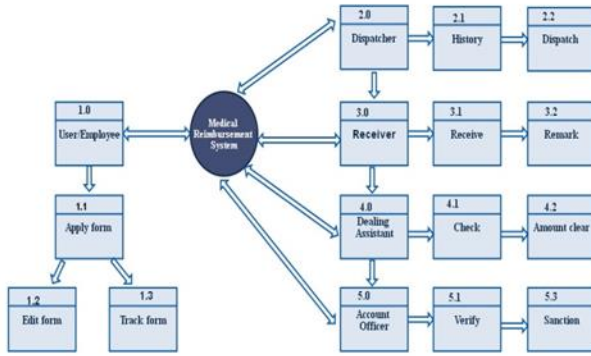


Fig. 4: Level 2 DFD

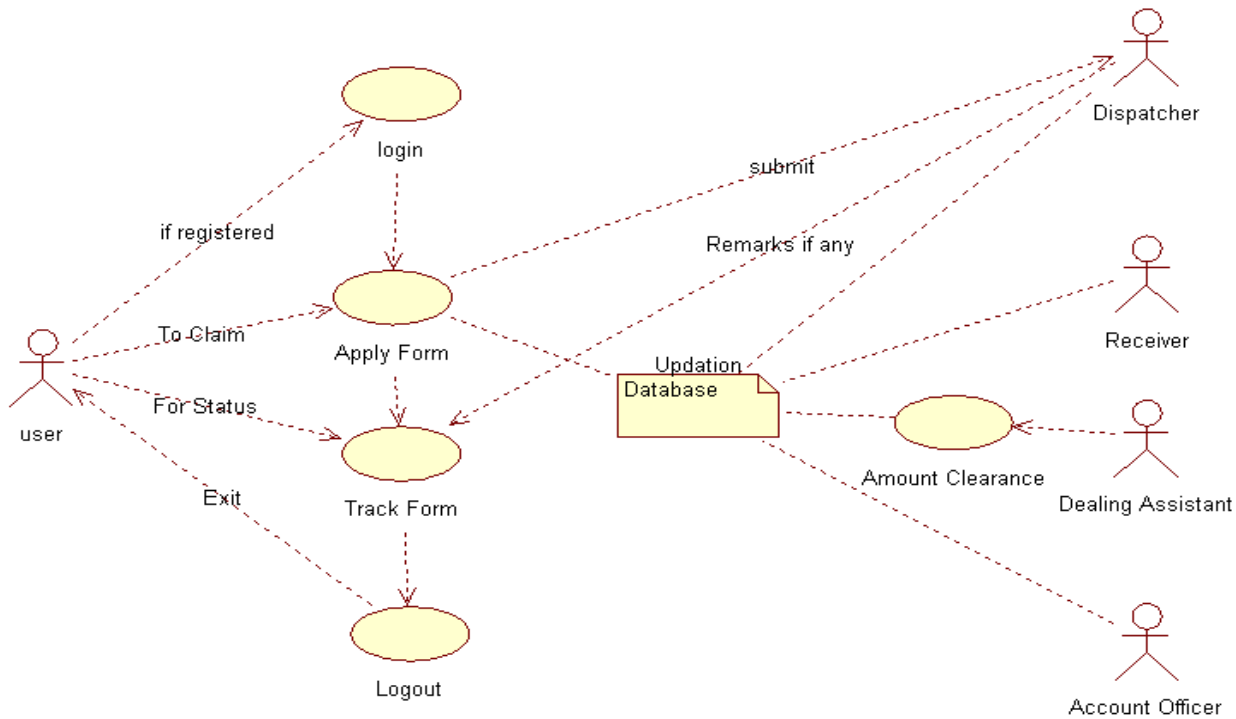


Fig. 5: Use Case Diagram

### STATE CHART DIAGRAM

The name of the chart itself elucidates the motivation behind the graph and different subtle elements. It depicts distinctive conditions of a part in a framework. The states are particular to a segment/object of a framework. A State graph outline depicts a state machine. Presently to clear up it state machine can be characterized as a machine which characterizes diverse conditions of an article and these states are controlled by outside or inward occasion appeared in [Figure -6].

### CLASS DIAGRAM

The class layout is a static chart. It identifies with the static point of view of an application. Class chart is not simply used for envisioning, portraying and reporting unmistakable parts of a system also to develop executable code of the item application. The class outline delineates the qualities and operations of a class moreover the restrictions constrained on the system. The class

blueprints are extensively used as a part of the showing of thing arranged structures since they are the fundamental UML diagrams which can be mapped clearly with article organized tongues. The class plot exhibits a gathering of classes, interfaces, affiliations, facilitated endeavors and goals. It is generally called an assistant outline showed up in [Figure 7].

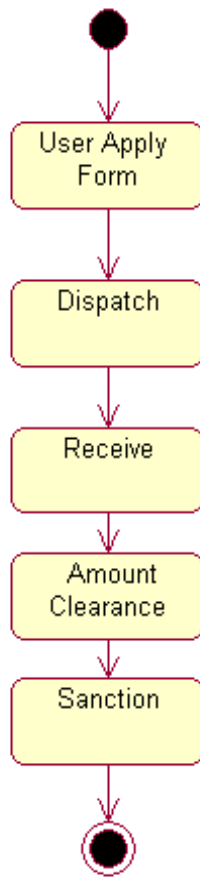


Fig. 6: State Chart Diagram

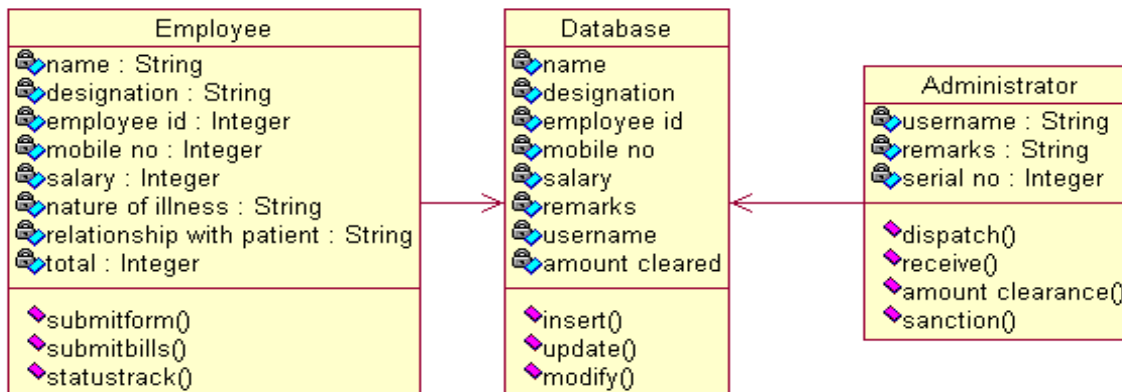


Fig. 7: Class Diagram

### SEQUENCE DIAGRAM

UML grouping charts are utilized to show how questions interface in a given circumstance. A vital normal for a grouping graph is that time goes through and through: The connection begins close to the highest point of the outline and closures at the bottom. A prevalent use for them is to archive the progress in an item situated framework. For every key joint effort, outlines are made that show how questions cooperate in different delegate situations for that coordinated effort appeared in [Figure 8].

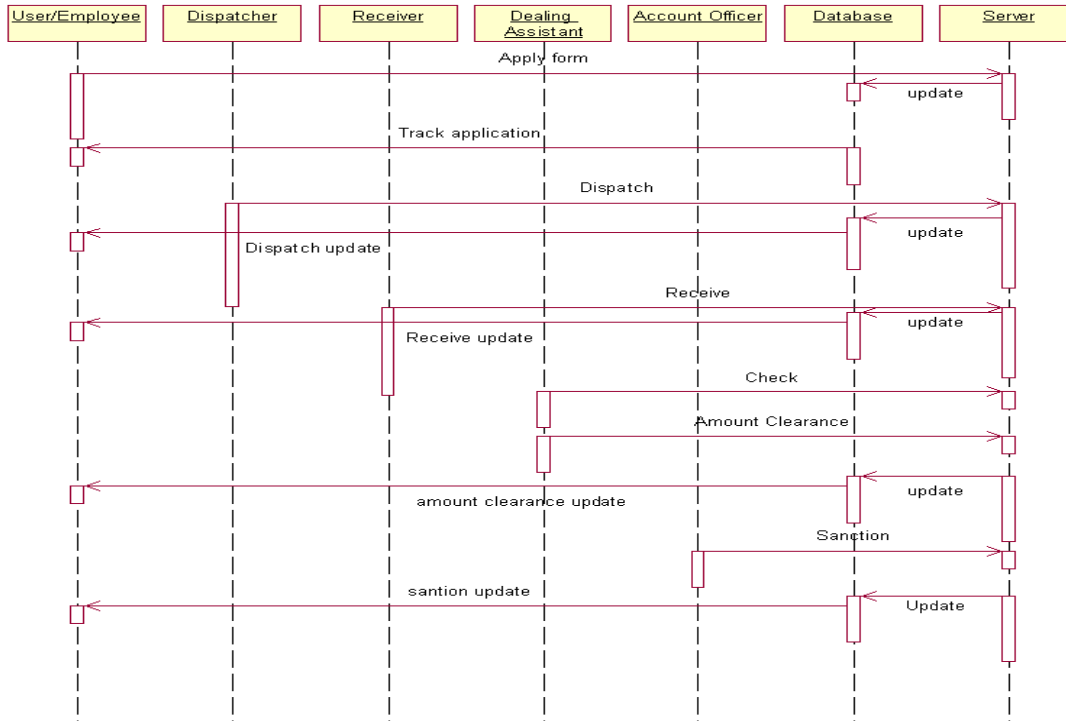


Fig. 8: Sequence Diagram

### COLLABORATION DIAGRAM

Collaboration diagram demonstrates the item association as demonstrated as follows. Here in Collaboration diagram the strategy call succession is demonstrated by some numbering system as demonstrated as follows. The number demonstrates how the techniques are called in a steady progression. We have taken the same request administration framework to portray the joint effort graph. The technique calls are like that of a succession outline. In any case, the distinction is that the arrangement chart does not portray the item association where as the joint effort graph demonstrates the article association appeared in [Figure -9].

### RESULTS

#### MODULES

##### USER LOGIN

- Apply for Medical Reimbursement
- Track user application

##### ADMIN LOGIN

- Dispatch and Receive user application
- Dealing Assistant check and amount clearance
- Sanction by Account officer.

#### MODULES DESCRIPTION:

##### USER LOGIN:

Apply for Medical Reimbursement

The User logs in through his/her employee id and fills in the Medical reimbursement form online and submits it. The hard copy of the submitted Application form, along with the original medical bills of the employee is submitted to the respective official for further processing of the claim.

Track user application

The Proposed system has an additional advantage for the user in a way of tracking his/her application. The User gets updated about the position of their application.

**ADMIN LOGIN**

Dispatch and Receive User Application

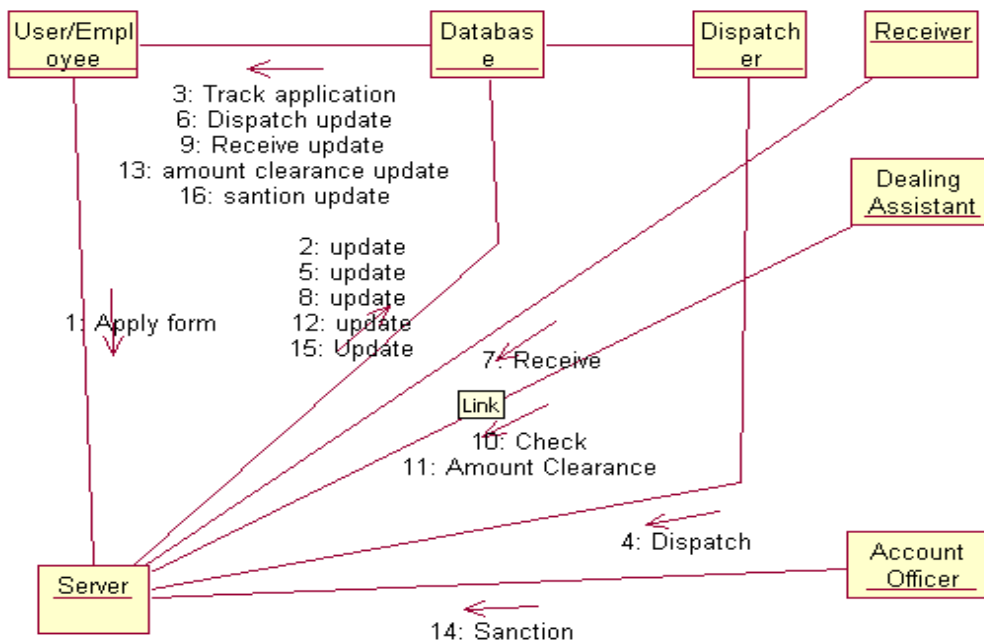
The final application form of the employee is checked along with the original medical bills by the Dispatcher for verification and remarks, if any are written and passed to the Receiver. The Receiver on receiving the form cross verifies the form and checks whether the imposed remarks of the dispatcher are met and forwarded to the Dealing assistant.

Dealing Assistant check and amount clearance

The Dealing assistant initially looks for the designation, salary and his/her relationship with the patient, based on the above mentioned details he calculates eligible amount of money to be cleared. The Dealing assistant passes the employee's application form with the amount eligible for sanctioning the claim.

Sanction by Account officer

The Account Officer checks the cleared amount quoted by the dealing assistant with the employee's medical bill amount. If all the requirements are met for sanctioning, the amount is sanctioned. Finally, the employee is reimbursed with the amount.



**Fig. 9: Collaboration Diagram**

## CONCLUSION

In this paper, we have tended to the issue of Medical Reimbursement preparing for BSNL. By method for devices, for example, Microsoft Front Page, XAMPP server and PHP, we have made a web application to apply for the case, dispense the case to the dispatcher and to redesign the status of every client. It likewise gives an office to store the repaid archive in the database, which can be recovered at whatever time for reference. Based upon the learning accumulated, we have additionally given an alternative to the client to check the repayment status on the web. Subsequently the proposed model has been created under different conditions and the outcomes are contrasted and the current framework. Along these lines this framework is produced to be more viable and effective.

## CONFLICT OF INTEREST

The authors declare no conflict of interests.

## ACKNOWLEDGEMENT

None

## FINANCIAL DISCLOSURE

The authors report no financial interests or potential conflicts of interest.

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