EVEREST ENGINEERING COLLEGE

(Affiliated to Pokhara University)

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[Subject Code: CMP290]
A
FINAL DEFENSE ON

"GATE"

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ABSTRACT

The system of private tuition has been in existence in NEPAL for a long time but in recent times it has grown manifold affecting the very core of the educational system. So in this busy world, searching for tutors for any subject is a very difficult job. In order to make it simple herewith we proposed an idea to find the subject expert/tutors through web application. The proposed work has the common platform where the tutor and the student/parent can access their respective views. In this application students can register and view the availability of the subject expert based on location and affordable rate. Based on the student's selection, the tutor will be booked for their classes and they will be notified. The existing system based on finding tutors for parents or finding prospective students for tutors is a very time consuming and tiring process for the parents, students and tutors. Even after spending hours on the task, the websites currently available do not give relevant results. Our project overcomes these flaws by reducing the time consumed for searching and displaying the results within the shortest time. Here is where the "GATE" website comes into picture.

Key Words: Tutor

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CHAPTER 1: INTRODUCTION

1.1 Background

Learning comes on the top of priority these days but learning on its own is next to impossible for most of us. To enhance the quality of learning, we all need extra effort in the learning process and in other perspectives people with qualification/knowledge are willing to be a tutor and need a good environment and decent income. So for both of them our system is a great platform.

This project concerns developing a Tutor finding system that will be used for finding tutors for students. It mainly focuses on locally available tutors at an affordable fee. According to our interaction with different students and parents, we came to know that it's been difficult to find a decent home tutor. To overcome the old system of finding tutors. We are attempting to create a web application which acts as a secured hub.

1.2 Problem Statement

Creating employment opportunity for qualified tutors and providing better knowledge for the student is the major goal of GATE

The following are among the problems that lead to the proposed creation and development of "GATE":

- The existing system is not responsive for the parents/students and tutors.
- The old system is time consuming and tiring.
- Difficult to find qualified tutors.

1.3 Objective

- To find tutors for students easily and provide opportunity to the qualified tutors.

1.4 Project Features

Tutor can:

- Sign Up/Login
- Manage Profile
- Manage Schedule
- Add New Subject
- Request Verification

Student/Parent can:

- Sign Up/Login
- Manage Profile
- Hire a tutor

Admin can:

- View tutor/Student
- Verify Tutors
- Manage Tutor/Students Profile

1.5 Feasibility Analysis

1.5.1 Economic Feasibility

Economic analysis is most frequently used for evaluation of the effectiveness of the system. More commonly known as cost/benefit analysis the procedure is to determine the benefit and savings that are expected from a system and compare them with costs, decisions are made to design and implement the system. This part of the feasibility study gives the top management the economic justification for the new system. This is an important input to the management, because very often the top management does not like to get confused by the various technicalities that are bound to be associated with a project of this kind. A simple economic analysis that gives the actual comparison of costs and benefits is much more meaningful in such cases. In the system, the organization is most satisfied by economic feasibility. Because, if the organization implements this system, it need not require any additional hardware resources as well as it will be saving a lot of time.

1.5.2 Technical Feasibility

Technical feasibility centers on the existing manual system of the test management process and to what extent it can support the system. According to the feasibility analysis procedure the technical feasibility of the system is analyzed and the technical requirement such as software facilities, procedure, inputs is identified. It is also one of the important phases of the system development activities. The system is technically feasible in the sense that it doesn't require any extra tools except a web browser and is easy to use so that no specific technical person is required.

1.5.3 Operational Feasibility

People are inherently resistant to change and computers have been known to facilitate changes. An estimate should be made of how strong the user is likely to move towards the development of a computerized system. These are various levels of users in order to ensure proper authentication and authorization and security of sensitive data of the organization.

The system offers greater levels of user friendliness combined with greater processing speed. Therefore, the cost of maintenance can be reduced. Since processing speed is very high and the work is reduced from the maintenance point of view, management is convinced that the project is operationally feasible.

CHAPTER 2: LITERATURE REVIEW

Since the evolution of online tutoring systems, tutor finding techniques has been a major topic of research for many researchers. Various articles**,** reference papers were analyzed to find out the best technique that can be used in tutor finding applications. In this chapter we made a comparison between the different techniques to get a better understanding for each technique's effectiveness. Then the related system that has the same functionality as our system is reviewed to help in understanding and gaining knowledge about how to implement the system in a real web application.

International platforms like superprof.com, universitytutor.com, teacheron.com, grateaupair.com and many more are trying to establish a hub to find a tutor in Nepal. And their attempt has not been successful till the date as their site is not convenient for Nepalese users. Many Nepali attempts were also done and also have been done to make it easier.

- merotutor.com: The first online tutoring website was introduced by merotutor in Nepal in 2016 with benefits and flaws too, we intend to improve lacking functions and facilities as well as update on a regular basis. MeroTutor misses out the option to hire the tutor directly through the website and is not active for a long time. Tutor monitoring about their qualification is not properly examined (Tutor, 2016)

- Home Tuition App: This app might be the first application of Nepal which works as a tutor finder app in Nepal since 9 Sept 2018 and it has got a decent rating in Playstore. But it is offered for android users only, not for iOS users and web platforms. And it’s not possible for everyone to have an app of a certain size in a mobile phone just to hire a tutor. (Ltd., 2018)

As per the article (Alija, 2007), they tried to present online tutoring as a solution to quality issues of e-learning that e-learning providers from all over the world are facing. They also briefly presented different roles of online tutors and the skills needed to perform these roles successfully. The online tutoring system was introduced to support students of e-learning courses. Through various re-searches they tried to ascertain the impact online tutors have on student activity and study success. Our research showed that tutors can improve study outcomes (although not so much students' grades) and that their activity is well accepted by students (especially part- time students). Finally, we tried to combine all of our findings in a model for online tutoring that tries to identify the key elements and skills tutors need for an efficient support of e-learning delivery.

As per American Tutor Association, a typical requirement to be a tutor are mentioned as: teaching certificate, first-degree certificate, background check and drug screening, positive rapport and engagement with students, excellent communication skills and we do not have any sort of tutor association i.e. we do not have any criteria. Therefore, most tutor finders in Nepal have not kept it as a requirement to be a professional tutor. But we as a team of "GATE" are trying to keep those requirements so that students will get qualified tutors. (Association, 2001)

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter presents the methodology that the study employed and they include research design, sampling methods, data collection method, the procedure of study, data analysis, limitation of the study, and ethical issues that are under consideration. Methodology is the systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with the branch of knowledge.

3.2 Hardware and software requirement

3.2.1 Software Requirement

- Google Chrome
- VS Code
- Figma

3.2.2 Hardware Requirement

- A general PC

3.3 Proposed system design

The methodology that we are using in our system is a spiral model. Spiral model is a combination of sequential and prototype model. There are specific activities that are done in one iteration which is spiral where the output is the small prototype of the large software. Thus, the same activities are repeated for all the spirals until the whole software is built.

There are six phases involved in the spiral model which are the initial planning phase, planning phase, analysis and design phase, implementation phase, testing phase,

deployment and evaluation phase. Every phase will be into action till the completion of the project.

Below diagram shows the different phases of the Spiral Model:

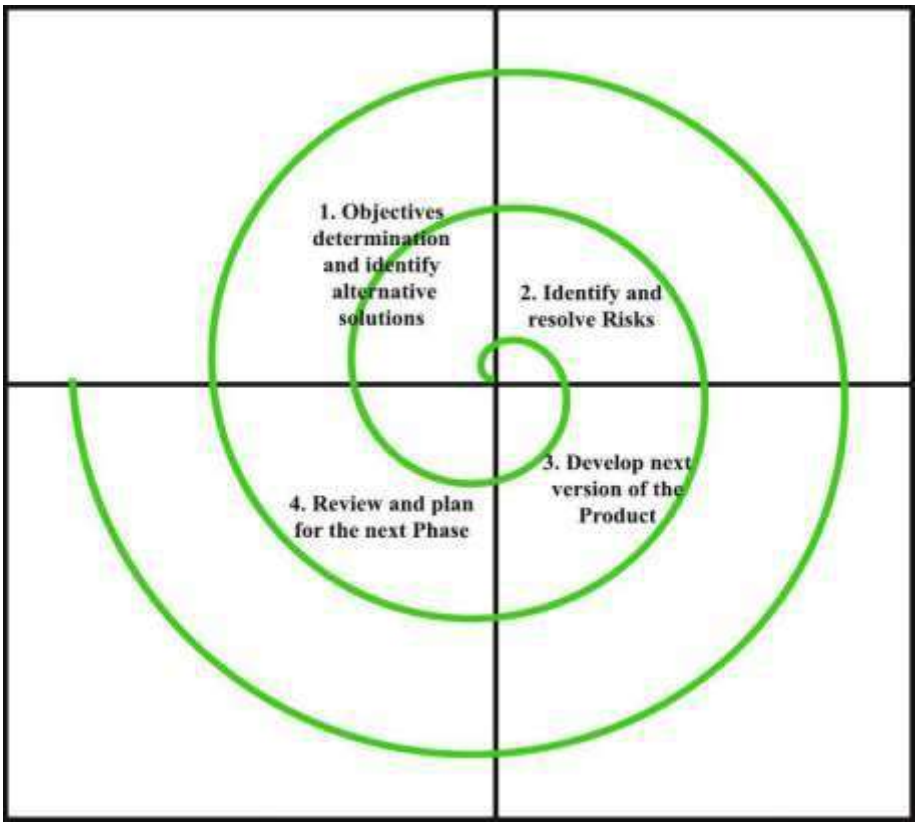


Figure 3.1 Spiral Model

Each phase of the Spiral Model is divided into four quadrants as shown in the above figure. The functions of these four quadrants are discussed below-

1. **Objective determination and identify alternative solutions:** We gathered all requirements. Then we identified, elaborated and analyzed at the start of every phase. Then alternative solutions possible for the phase were proposed in this quadrant.
2. **Identify and resolve Risks:** During the second quadrant all the possible solutions were evaluated to select the best possible solution. Then the risks associated with that solution were identified and the risks were

resolved using the best possible strategy. At the end of this quadrant, Prototype was built for the best possible solution.

3. **Develop the next version of the Product:** During the third quadrant, the identified features were developed and verified through testing. At the end of the third quadrant, the next version of the software was available and the process went on till the completion of the project.
4. **Review and plan for the next Phase:** In the fourth quadrant, we evaluated the so far developed version of the software. In the end, planning for the next phase is started.

3.4 Proposed project block diagram

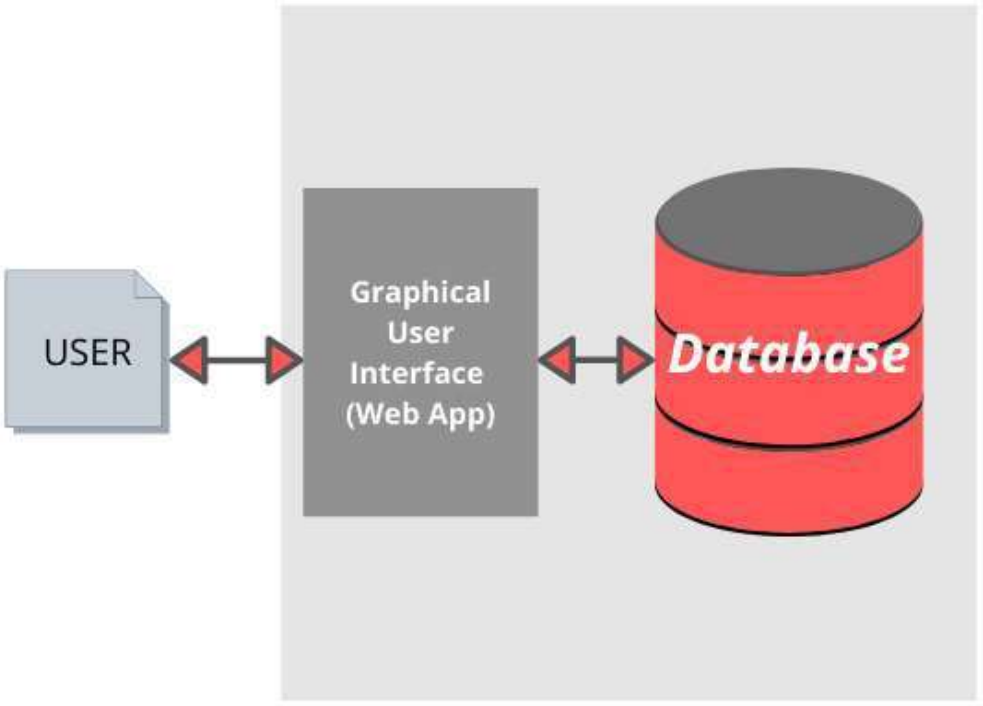


Figure 3.2 Block diagram of GATE website

3.5 Working Principle

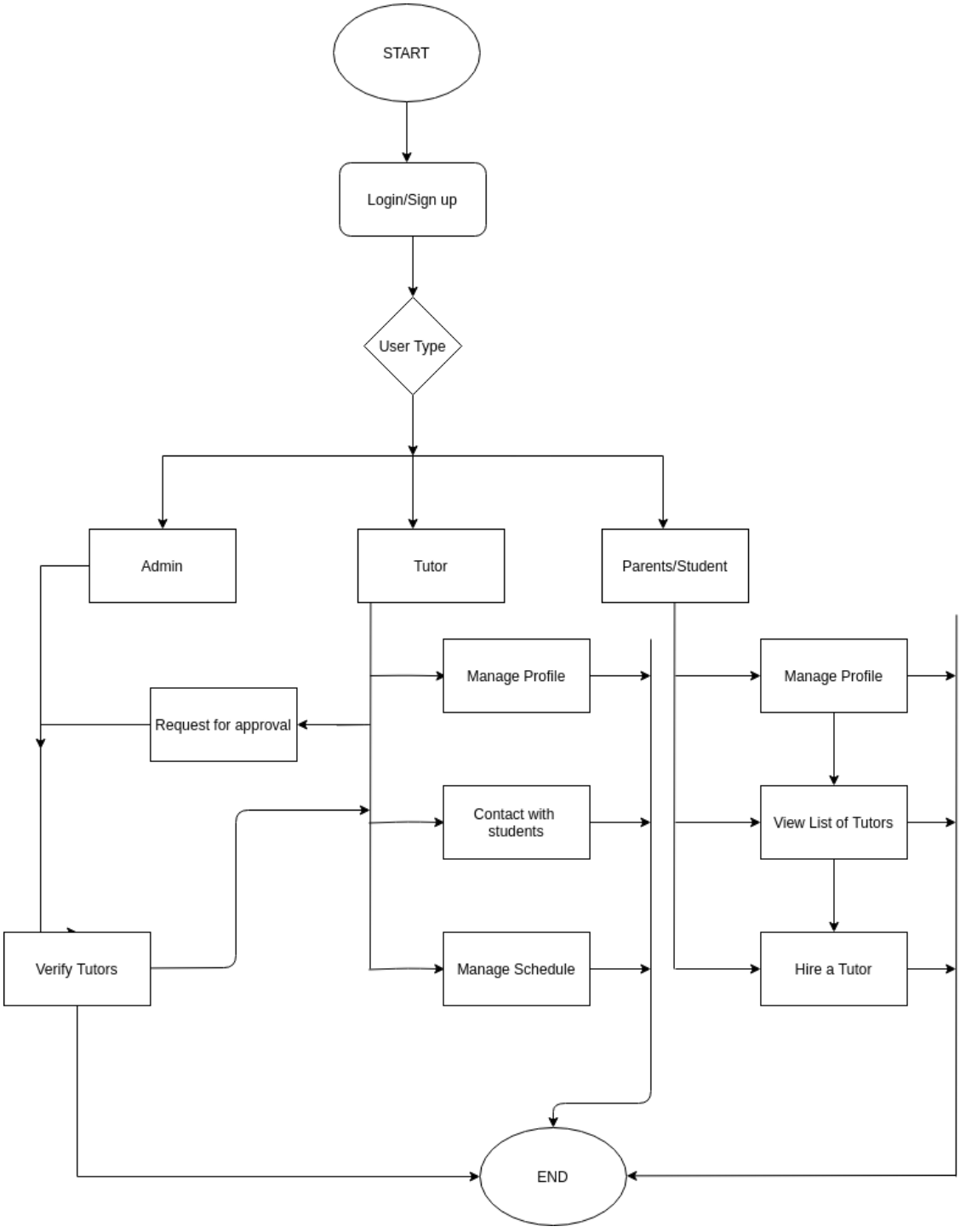


Figure 3.3 Flowchart of GATE website

3.6 Data Flow Diagram

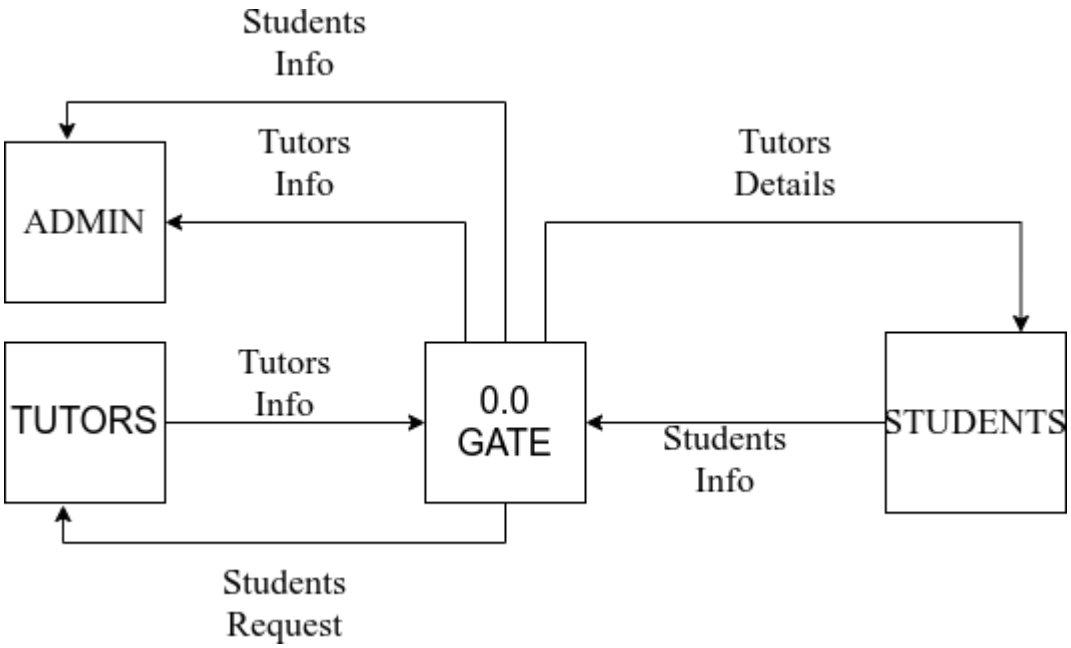


Figure 3.4 Data Flow Diagram 0 Level

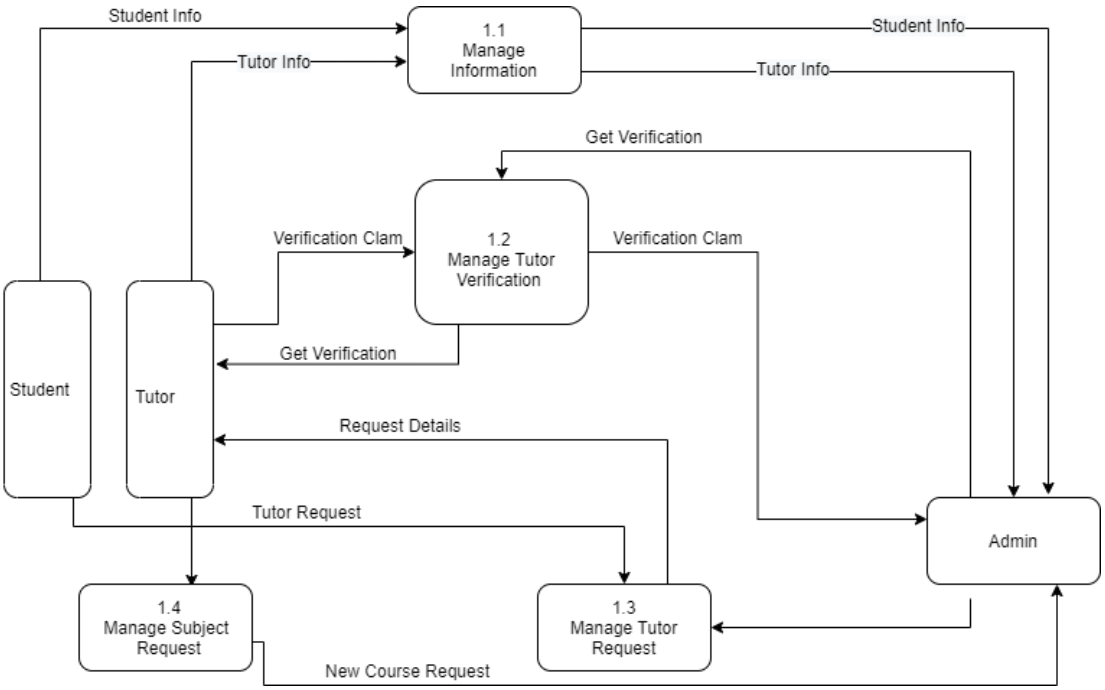
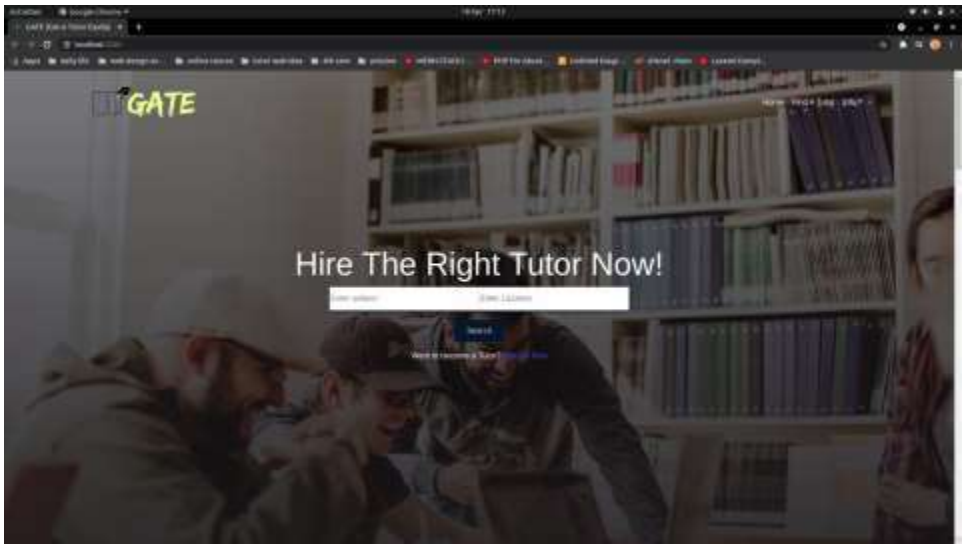
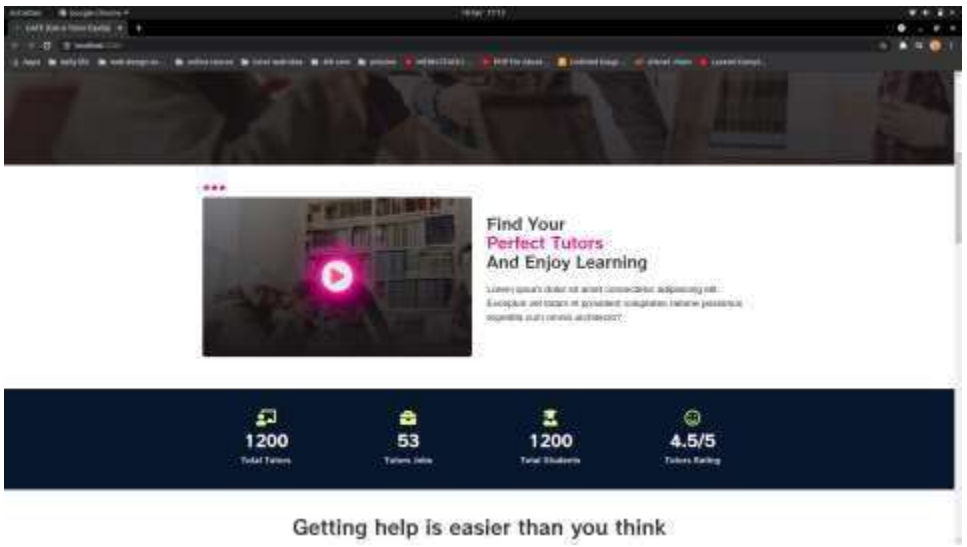


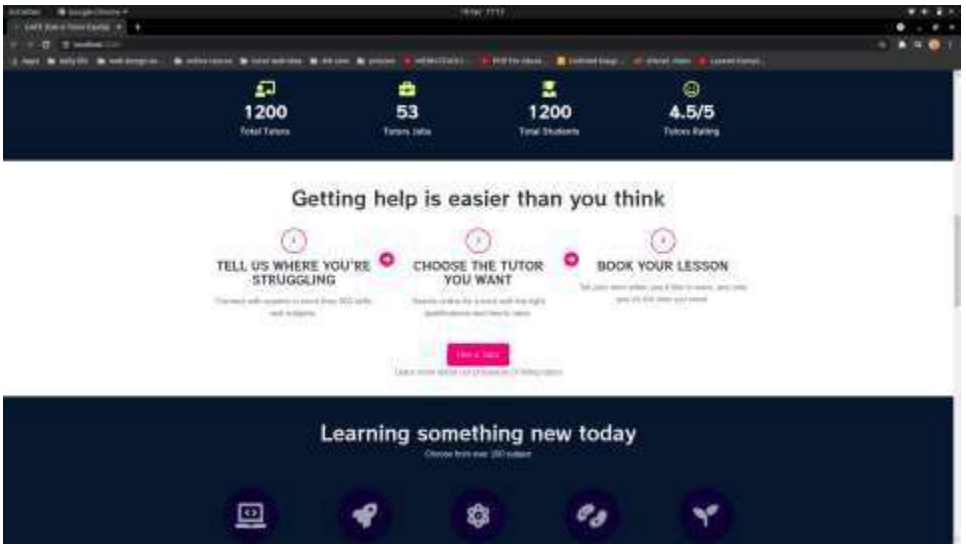
Figure 3.5 Data Flow Diagram 1 Level

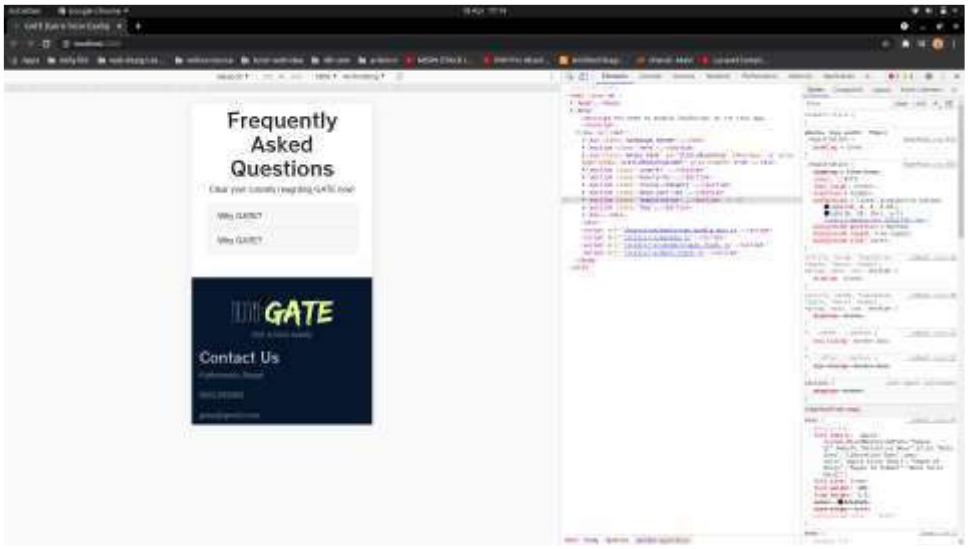
CHAPTER 4: Results and analysis

4.1 Output






1200
Total Tutors
53
Tutors Jobs
1200
Total Students
4.5/5
Tutors Rating
Getting help is easier than you think
TELL US WHERE YOU'RE STRUGGLING
CHOOSE THE TUTOR YOU WANT
BOOK YOUR LESSON
Learning something new today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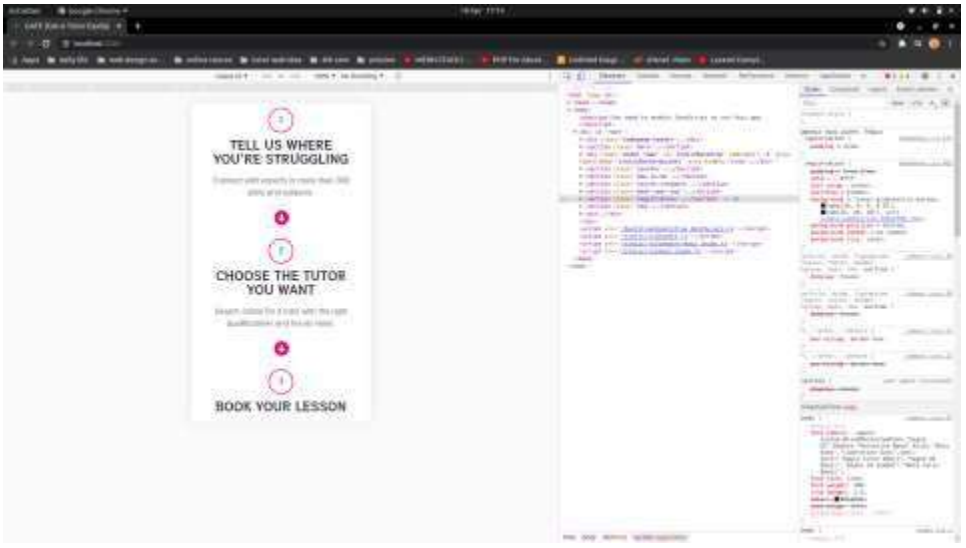
GATE
Contact Us


TELL US WHERE YOU'RE STRUGGLING
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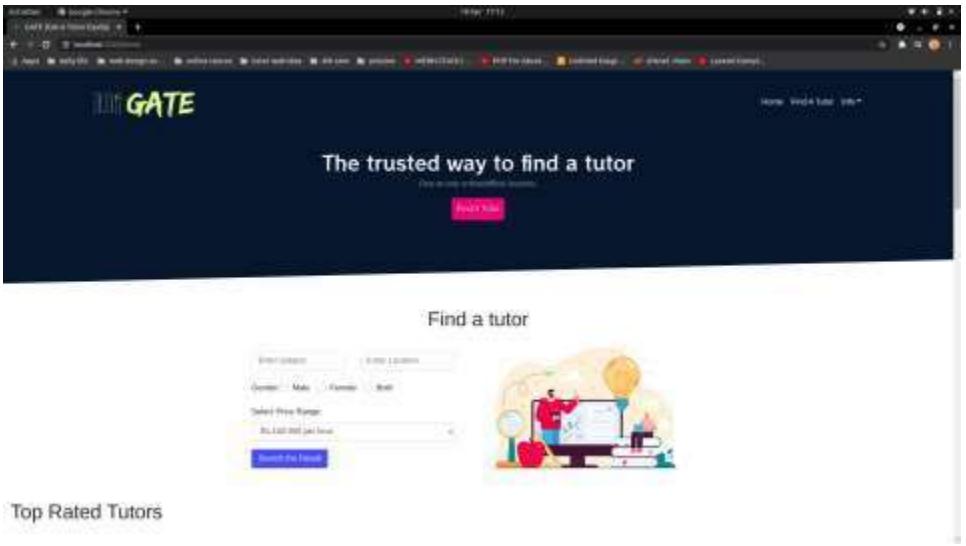
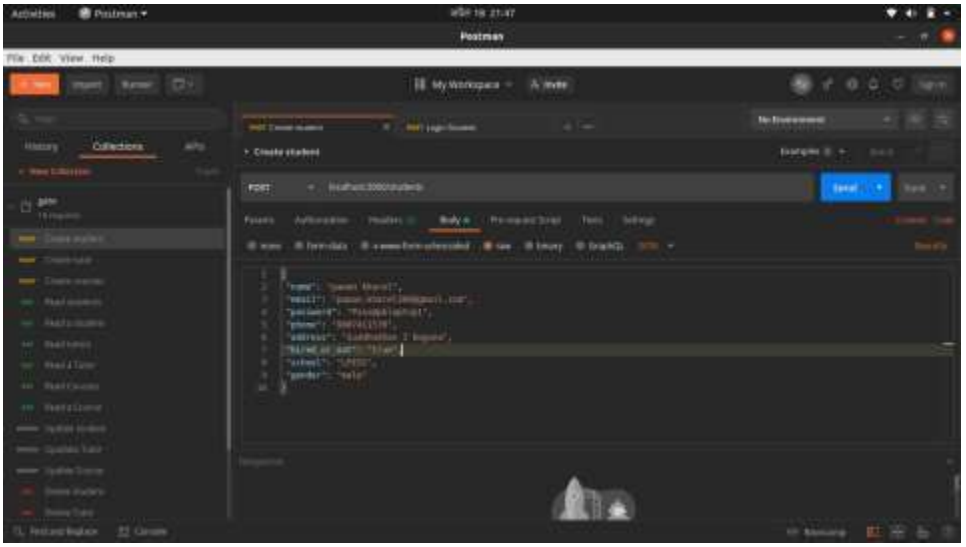
BOOK YOUR LESSON


GATE
The trusted way to find a tutor
Find a tutor
Top Rated Tutors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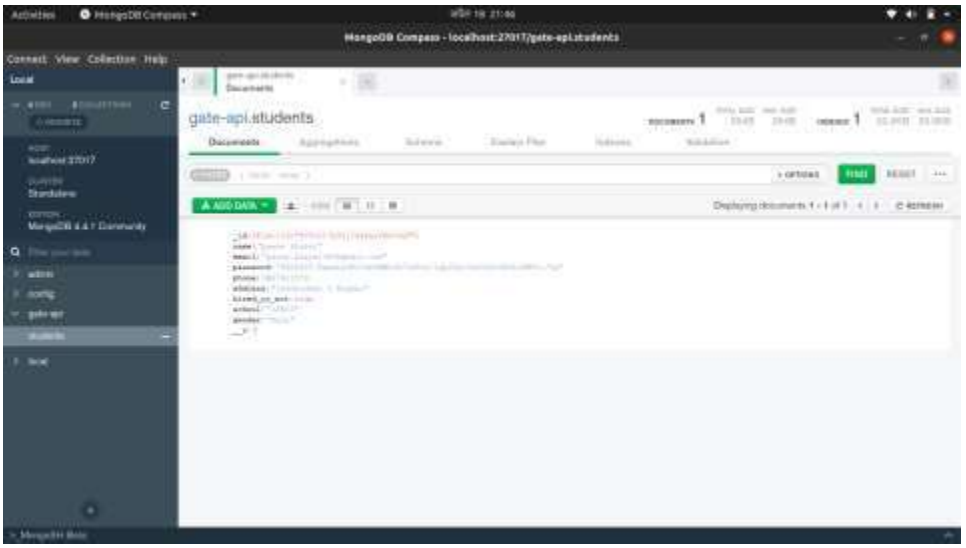
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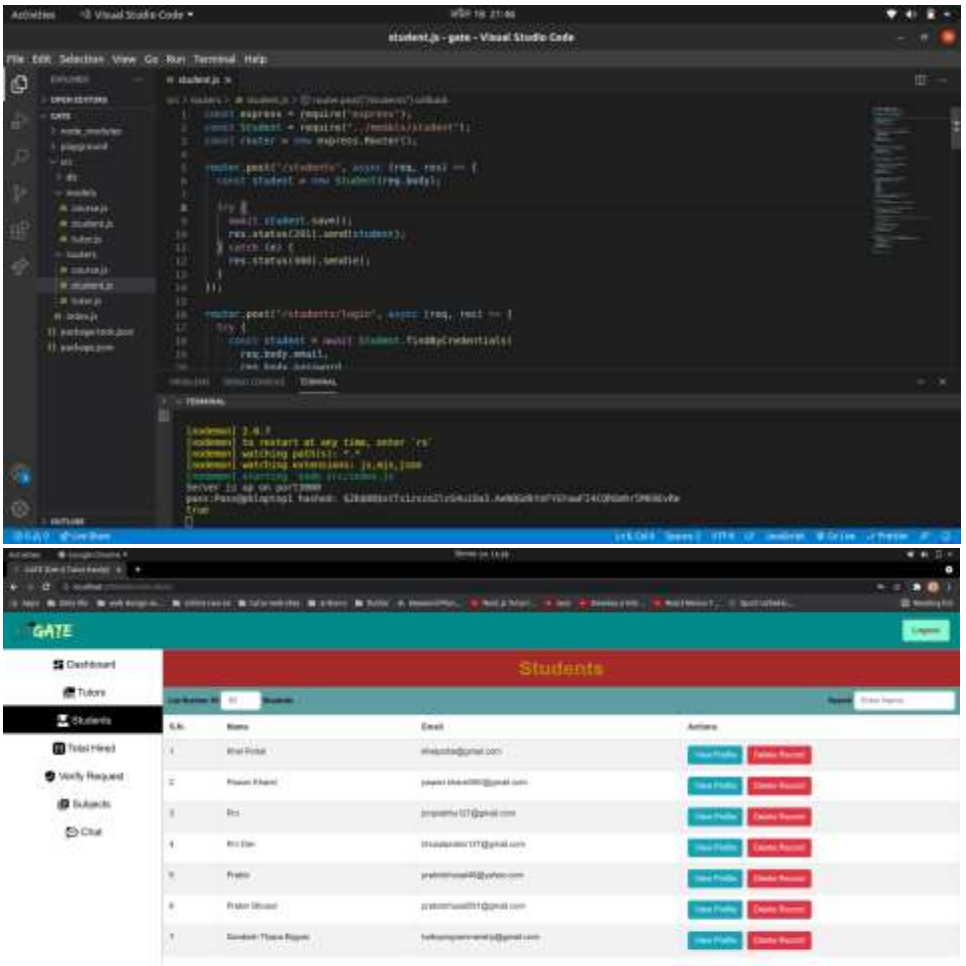
gate-api.students



After completion of this project students/parents can easily hire a tutor nearby at an affordable price.

4.2 Problems Faced

- Lack of proper group discussing and physical interaction.
- Problem in sending email.
- Debugging problems
- Chat System connection Problem

4.3 Remaining Work

- UI/UX Design of certain part
- Admin Panel
- Proper Hiring functionality

4.4 Budget Analysis

Cost estimation of our project development and running:

Table 4.1 Budget Analysis

Hourly cost per programmer	Rs.50
No. of hours per day	5 hours
No. of working days per week	5 days
Project Period	8 weeks
Extra cost	Rs.500
Total project cost	Rs.10,500

4.5 Work Schedule

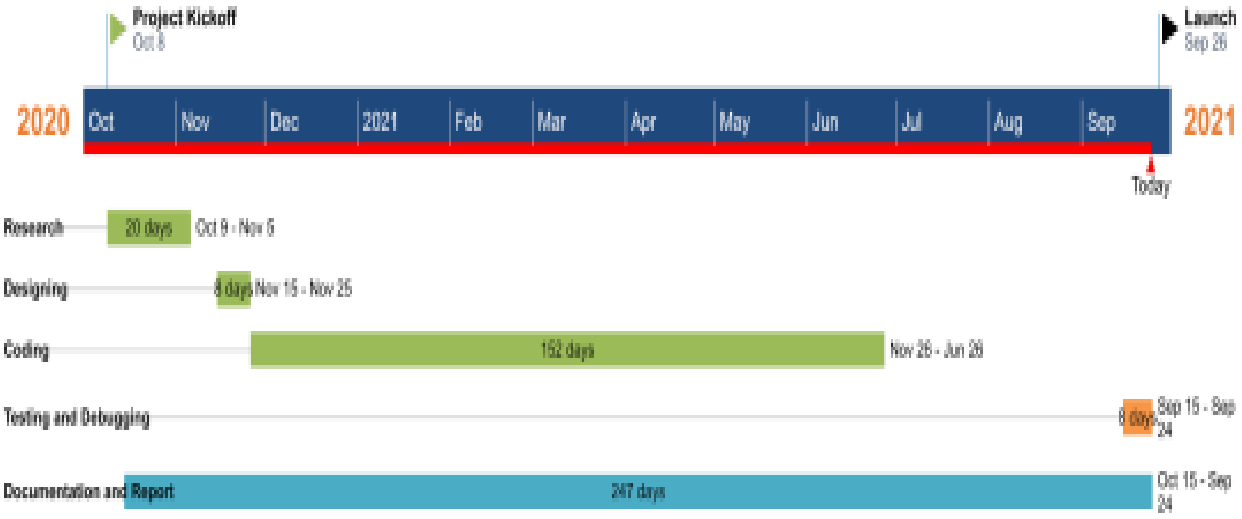


Figure 4.4 Gantt chart

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