

University Admission System

Software Project-1

Submitted By

18-36674-1	ANISUZZAMAN.
18-36705-1	MD. SIFAT RAHMAN.
18-36954-1	FAHIM HOSSAIN.
18-37796-2	JANNATUL NAYEEM KABIR.

Department of Computer Science Faculty of Science & Technology American International University- Bangladesh

Date of submission: 19th April 2022.

Declaration

We declare that this thesis is our original work and has not been submitted in any form for another degree or diploma at any university or other institute of tertiary education. Information derived from the published and unpublished work of others has been acknowledged in the text and a list of references is given.



Capit

Anisuzzaman (18-36674-1)

Department of Computer Science.

MD. Sifat Rahman (18-36705-1)

Department of Computer Science.



Fahim Hossain (18-36954-1)

Department of Computer Science.



Jannatul Nayeem Kabir (18-37796-2)

Department of Computer Science.

Approval

The thesis titled "University Admission System" has been submitted to the following respected members of the board of examiners of the department of computer science in partial fulfilment of the requirements for the degree of Bachelor of Science in Computer Science has been accepted as satisfactory.

Kazi Sadia

Lecturer & Supervisor

Department of Computer Science

American International University-Bangladesh

Moshiur Rahman

Associate Professor & External

Department of Computer Science

American International University-Bangladesh

DR. MD. Abdullah-Al-Jubair

Assistant Professor & Head (Undergraduate)

Department of Computer Science

American International University-Bangladesh

Professor Dr. Tafazzal Hossain

Professor & Dean

Faculty of Science & Information Technology

American International University-Bangladesh

Dr. Carmen Z. Lamagna

Vice Chancellor

American International University-Bangladesh

Table of Contents

CHAPTER 1: INTRODUCTION
1.1: OBJECTIVE61.2: BACKGROUND STUDY61.3: PROJECT SCOPE61.4: INTENDED AUDIENCE6
CHAPTER 2: SYSTEM STUDY
2.1: FEATURES OF THE SYSTEM72.2: DATA MANAGEMENT92.3: LIMITATION11
CHAPTER 3: SYSTEM DESIGN SPECIFICATION
3.1: INTRODUCTION 12 3.2: LOGICAL DESIGN MODEL 13 3.3: DATA DICTIONARY 14 3.3.1: ER DIAGRAM 14 3.3.2: USE CASE 15 3.4: SOFTWARE AND HARDWARE REQUIREMENT SPECIFICATIONS 16 3.4.1: SOFTWARE REQUIREMENT 16 3.4.2: HARDWARE REQUIREMENT 17
CHAPTER 4: QUALITY ATTRIBUTE
4.1: USABILITY 17 4.2: PERFORMANCE 18 4.3: SECURITY 19 4.4: FEASIBILITY STUDY 20
CHAPTER 5: CONCLUSION
5.1: FUTURE ASPECT
CHAPTER 6: REFERENCE.

Project Summery

As technology is growing immensely in recent years, certain improvements need to be made. Education is the backbone of society. For proper education we need proper educational system. Recent years students who passed higher secondary level exams face problems for applying in university and other higher education because of poor management and insufficient resources. We will develop a software where students can get information related to their interest and proper guidance to apply for their selected university. We will implement our project using Laravel framework. Laravel is a powerful MVC PHP framework, designed for developers who need a simple and elegant toolkit to create full-featured web applications. Laravel is accessible, yet powerful, providing tools needed for large, robust applications. In the project we will be using Laravel to create a web application where students can come and apply for their interested university, they can find question bank of previous years for particular university, they can also seek for guidance from teachers. they can also enroll for short courses held by teachers by paying some amount of money through BKash.

CHAPTER 1: INTRODUCTION

1.10BJECTIVE:

Currently, all work at the time of student entrance is done manually using paper and ink, which is relatively slow and takes a lot of effort and time. COMPUTERIZED MANAGEMENT affects our society in more areas than we are probably aware of in today's technological society. The number of things to keep track of in an educational institute, universities, and other places is huge. The critical premise driving the requirement for a college admissions system is the ease with which colleges can be watched closely.

1.2 BACKGROUND STUDY:

Our project's mission is to build an application which will help in the admissions process. The students face a lot of difficulties applying for their selected universities. Following the rules and regulations set by universities our software will guide the students to more reliable and dependable approach. Through our software students will be able to:

- Update their information.
- Inquire knowledge about their respected universities.
- Enroll to course taken by experienced faculties.
- View previous questions and take preparations.
- Get expert advice.

1.3 PROJECT SCOPE:

"Online Admission System" is the website for conducting online university admissions. Using this software students can get knowledge and information about their respected universities . they can also check if they have minimum requirement to enroll to universities. By using our software they don't have to take the hassle to fill up form for every university they chose. They can simply give information in the software and by using automation the software will do it shelf. By using our software they don't also have to worry abut taking preparation for admission exams and finding questions bank. Our software is enriched with updated questions and answers from previous years and solutions given by experts. Our software also has features will allows students to enroll into courses taken by experienced faculties and get expert guidance.

1.4 INTENDED AUDIENCE:

"Online Admission System" is a web based application based on University admission management system. For our software Intended audience are mainly fresh passed higher secondary students who are now willing to enroll to universities.

CHAPTER 2: SYSTEM STUDY

2.1 FEATURE

There are 3 users in our software. They are

- 1.Student
- 2.Teacher
- 3.Admin

Features of Student:

- 1.Registration User(student) has to register themselves in the system first.
- 2.Login After successful registration, user can login with required information.
- 3.Download previous year's question- User(student) can download previous year's admission examination questions.
- 4. View University List User can see the universities' requirements and what are the eligibility criteria.
- 5.Enrol to courses- User(student) can enroll in their suitable courses.
- 6.Download class record- There will be records of the live classes that will taken by the teachers. Students can download them.
- 7.Get notification- Student can get notification of both the deadlines of form-fill up date and examination date.
- 8.See payment history- Students can see their payment history of which they have paid to access the courses.
- 9.Pay for paid courses- Students can pay through online banking systems for the paid courses.
- 10. View course results- Students can take online exams and see the results.
- 11. Fill up university admission forms- Students can fill-up their desired universitys' forms.

12.Modify student informations- Student can modify the informations which they have given on the time of registration.

Features of Teacher:

- 1. View courses assigned- User(teacher) can see the courses they need to teach and which student has enrolled in which course.
- 2.Download class record- There will be records of the live classes that will taken by the teachers. They can download the records..
- 3. View Student results- Teachers can see individual students' results.
- 4. Input student results- Teacher can input the results of the tests that students may take online.
- 5.Login- After successful registration, user can login with required information.
- 6.Registration- User(Teacher) has to register themselves in the system first.

Features of Admin:

- 1.Register- User(Admin) has to register themselves in the system first.
- 2.Login- After successful registration, user can login with required information.
- 3.Document modification- Admin can modify the documents of students, if they request to do so.
- 4.Upload previous year's question- Admin only can upload the previous years' questions of all the univerties.
- 5. View form/university portal- Admin have the direct access to the university portal or application forms.
- 6.CRUD operations on university list- Admin can add/delete any university name from the university list.
- 7. Upload/Edit course documents- Admin can edit any courses' documents of required.
- 8. View paid course information- Admin can view the payments information of the paid courses.
- 9.CRUD operations for Teacher & Student information- Admin can create, add, update, delete student's or teacher's account.

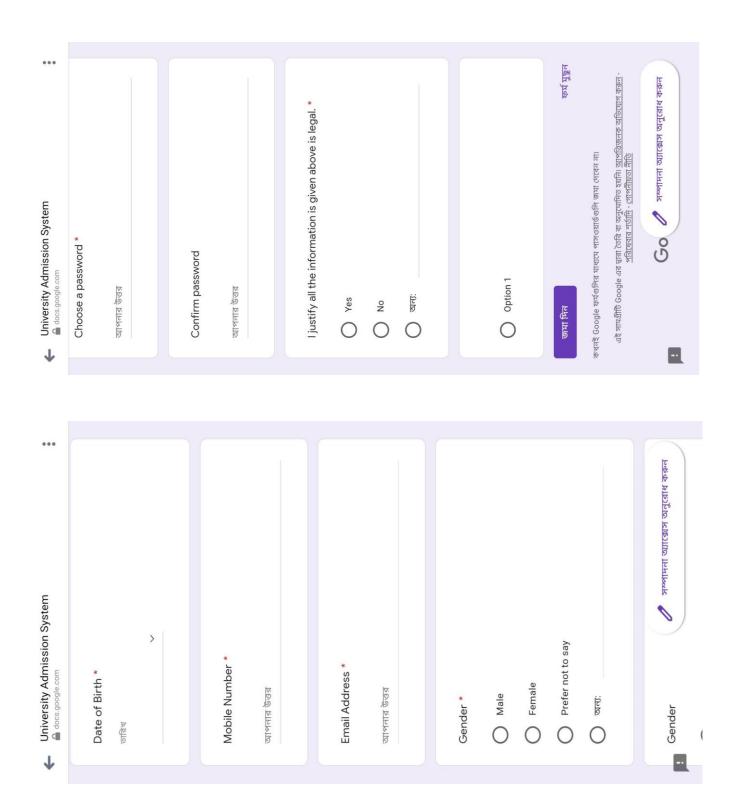
- 10.Modify/Add popular course packages- Admin can modify or add any information in the popular courses. Also can make packages of the popular courses.
- 11. Send update notification for admission exam date- Admin can send notifications to the students' account according to their priority list.
- 12. Fill up form information- Admin can fill-up the admission forms if any student request to do so.

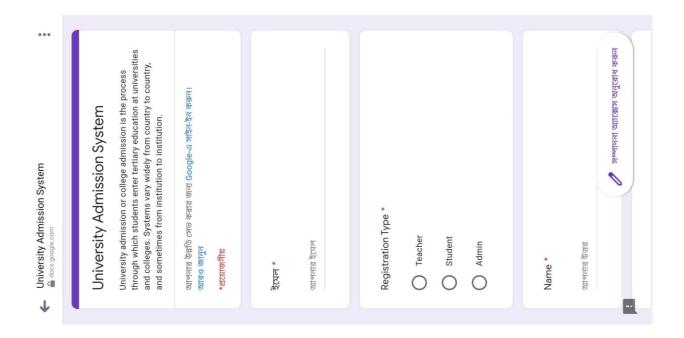
2.2: DATA MANAGEMENT

It will be used to make decisions. There are three questions to respond to. First, because the current technique is manual, all work is done by hand with paper and ink. It is far more expensive and complicated to use and run, and time-consuming. As a result, our computerized automated student admissions method is considerably more realistic in terms of cost, time, and effort. When compared to the prior manual approach, it saves time and work. It is an expense as just a single operator will be required to run the system. he is in charge of entering data into the database using a user interface which has been supplied to him, who is also capable of displaying all data in an HTML tabular manner in order to convey information in the case of kids who are. It is technically possible since the entire system uses the most contemporary technology to develop web-based systems and databases such as ASP.NET, MS Access, and SQL Server. It uses the latest up-to-date hardware technologies, such as P4 Systems, to make it simple to use. It is socially viable because the system allows an attractive user interface to the user. He feels pretty totally comfortable on it as an operator/end-user. The operator's/end user response is rapid and excellent. It employs computers because, as previously mentioned, it requires a much lower cost. As a result, it is speedy to operate and for the user to work on; The Current System's Activity:

- 1.Now, all work is done by hand in bulk files, making it very difficult to run and maintain the reports of students who have recently joined the institute. When the student firstly enols in college.
- 2. He/she first obtains an entrance form from reception.
- 3. Completes the form and submits it to the office.
- 4. The completed form is compared to records such as the university's merit list and information and reviewed by an official; if there are any errors, they are fixed.
- 5. The applicant pays the fees at the time of submission.
- 6. The university issues the candidate an enrollment number after submitting the admission form.

Here are some screenshots of the form that will be filled up when user will register:





2.3 LIMITATION

Collecting data from several universities, their requirements, their wanting, a form of automation everything is included to the part limitation. For that we had to collect a bundle of data. Students are required to submit their valuable information in registration form through online portal. Collecting such data form the software through automation is hard. Manually collecting the information by visiting the site of major university was the key idea in the concept. A lot time and effort was invested to finding the students information and recommended university information through manual searching. Software required advance mechanism such as automation. While implementing such hard algorithm structure came a lot of obstacle and hardship throughout the process. Some of the information taken from the students where not needed for some universities so keeping the common ones where the right approach. For getting the common information for all the major university manually took time and some information with where exception must be given in time of the admission form for the software to run properly and fulfill its task. Working in small groups has its advantages and disadvantages. Some of the implementation done in the software took a lot of effort for those who were weak in complex algorithm and system design. The interface design pattern is quite vintage regarding the trend and follows architecture of previous generation with may be easy for students to understand and read.

CHAPTER 3: DESIGN SPECIFICATION

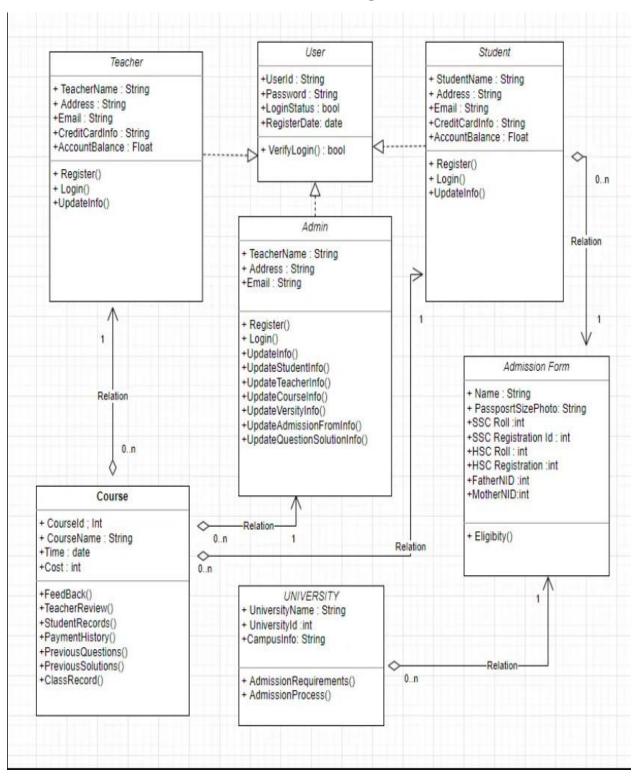
3.1Introduction:

The goal of the University Admission System is to provide an online university admissions application/portal. It is an online system which can be accessed inside and outside the company with the proper login credentials. Administrator and user access options are available in our system. An administrator oversees the student management system. The administrator's job is to admit people and keep track of everything. Logging into the system, the user can only see the student's information. He is unable to make any adjustments. There are two modules in the system. They are as follows:

- User.
- -Administrator.

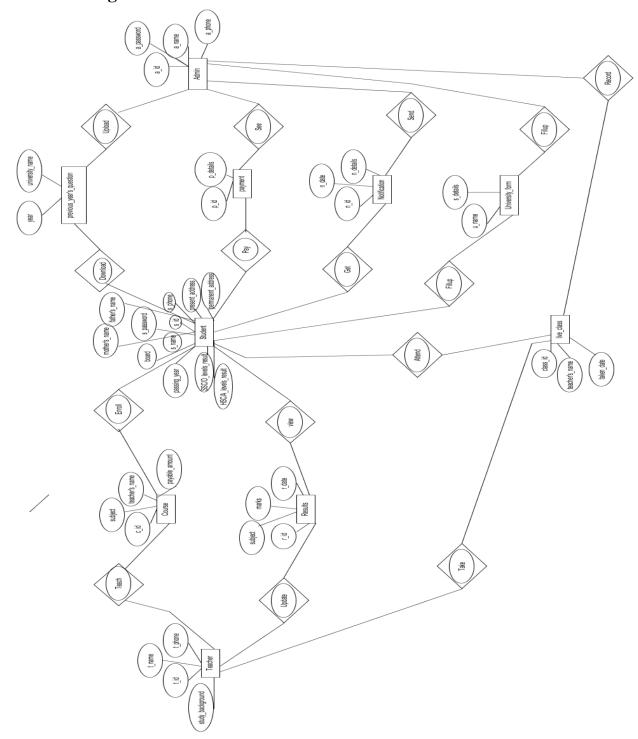
Students logging in must apply for the course by completing an online registration application. Logging in as an administrator gives you access to/search for the information you've put up by the applicants.

3.2: LOGICAL DESIGN MODEL (Class Diagram):

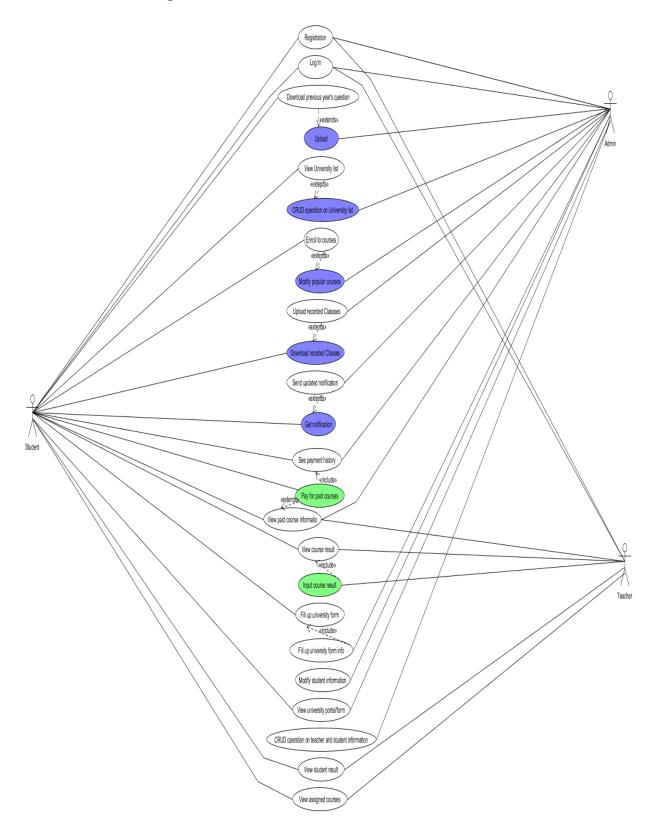


3.3: DATA DICTIONARY

3.3.1:ER-Diagram:



3.3.2: Use-Case Diagram:



3.4: SOFTWARE AND HARDWARE REQUIREMENT SPECIFICATIONS:

3.4.1: SOFTWARE REQUIREMENT:

The requirements specification document is the ultimate product (SRS). The specification activity may come after the complete analysis is complete for minor problems or problems that are well understood. However, it's more likely that the problem analysis and definition will occur simultaneously. Following the investigation, the action contains all of the specification activity information. Even if formal modelling is employed during the study, the move from analysis to the specification should not be assumed to be simple. The knowledge gained about the system is essentially what goes from the requirements analysis activity to the specification activity. Modelling is simply a method for achieving a deep and complete understanding of the proposed system.

Data analysis is known as data analysis, reviewing, cleaning, manipulating, and modelling data to highlight relevant information, conclude, and assist in decision-making. Data analysis includes several dimensions and approaches, spanning various techniques in various business, science, and social science disciplines under multiple names. For example, data mining is a type of data analysis that focuses on knowledge discovery and modelling for predictive rather than descriptive purposes. The work of identifying essential requirements is critical to the project's development. The basic criteria are discovered in this system through surveying. The vital needs of our website's users are identified through surveying. The many choices of tour information that must be included on the website are offered by questionnaire during the surveying.

-It is evident from the survey analysis graph which of the user's requirements are the most important. Therefore, it was agreed to provide only the necessary information and leave out the less important details.

Requirements for the project:

Automate manual legal paperwork done immediately of a student's admission to the institute (fees deposition).

Remove all paper work from the issue.

Manage student data (academic, personal, and fee) efficiently.

Required Software:

Operating System: Microsoft Windows XP Front End tools: HTML, CSS, AJAX, Laravel

Back End tools: MS Access, SQL Server Management Studio

3.4.2: HARDWARE REQUIREMENT:

CPU: Intel 11th gen core i5 and GPU GTX 1050 Ti OC 4GB

RAM: 16GB HDD: 40 GB

Keyboard, Monitor, Mouse, Printer 4.

CHAPTER 4: QUALITY ATTRIBUTE

4.1 USABILITY

In today's colleges, student information is manually entered. Separating student information into distinct records is a time-consuming procedure. All of these records must be consulted and updated. There's a potential that other manual errors will occur. When the student first enrolls in college. They first obtain an entry form from reception. Completes the form and submits it to the office. The completed form is reviewed against records such as the university's merit list and details and then validated by an official person; if there are any errors, they are fixed. The user needs to submit the payment at the time of application. The institute assigns an admission number to the candidate after applying. 7. The candidate receives a receipt for the fee deposit.

Disadvantages of the Current System:

It requires much workforce, which means much effort, and much money, and it's challenging to operate and maintain. Because all of the work is done on paper, it is pretty challenging to identify a particular document. The proposed system's goal is to remedy the current system's shortcomings. The system's needs were derived from previous errors and comments from users of previous metrics systems. The suggested system's objectives are as follows: Reaching out to students who are dispersed across the country: - One of the main goals of the admissions system is to communicate with all of the students who are spread out across the country. Reduce the time it takes to process student applications, admit a student, conduct an online examination, verify student marks, and send call letters to selected students by reducing the time it takes to process student applications, admit a student, conduct an online examination, verify student marks, and send call letters to selected students. Data handling in a centralized manner: - Transfer data smoothly to all departments concerned and manage data in a centralized way. Paperless Reduce the number of people required to complete all admission and administration tasks by minimizing the paperwork required. Reduce the costs associated with the admissions process. Improve the

operational efficiency of the process by enhancing the quality of the process. Applicants will register themselves, giving the system a mechanism to associate a user with their application (s). When a user registers in, the system will display personalized information, and specific information, such as name and address, will be automatically added to each program.

4.2 PERFORMANCE:

It is operationally practical because the system provides an appealing user interface to the operator/end-user, making it very easy for him to work with. The response time to the operator/end-user is rapid and accurate. Because, as previously stated, it is considerably less expensive and relies on computer work, it is swift to run and simple to use. The system's purpose is to organization's performance by automating processes and realizing the vision of paperless admission. The following are some of the system's objectives: Organize a vast quantity of student information. Manage all the information about the students who have signed up for the course. Create student accounts and keep track of their data. View all of the students' knowledge. Reduce the amount of time it takes to interview students for selection. Record updating, alteration, and deletion should be made accessible. It is operationally practical because the system provides an appealing user interface to the operator/end-user, making it very easy for him to work with. The response time to the operator/end-user is rapid and accurate. Because, as previously stated, it is considerably less expensive and relies on computer work, it is swift to run and simple to use. After a student has completed an application, they will be able to log in to the system to check on its status. Applicants will also have the ability to make changes to their application information. Forms, similar to those used to register and apply, will be used to input the new information and include the current information as a starting point. The only time an application will be locked for modification is after it has been submitted for admission, which is after the last submission date, at which point the user will no longer be able to view the application. Giving each student a unique ID will allow them to apply to many classes while also allowing the system to avoid wasteful application duplication. In addition, by requiring a registration process, the system will be more secure, as once user logs in with their passcode, they will be the only ones who can alter their information and submit applications. This system's user interface must be straightforward. Most importantly, the pages must be simple to read, comprehend, and navigate. There should be no contrast difficulties, and the color palette should be adequate to create familiarity with the university. There are numerous actions that the system can accomplish, and they must be logically arranged or displayed in an intuitive sequence to allow the user to complete activities quickly and efficiently without becoming lost in large amounts of text. The system must also indicate a significant amount of data, organized into categories or on multiple pages to avoid confusion.

Furthermore, a small amount of data may be displayed at first, such as a time or dollar limit, and the opportunity to access more detailed information on the issue should be apparent. Individually differentiated information displays and functional objects should allow users to navigate through recognition rather than recollection. Furthermore, each function must contain the ability to cancel, allowing the user to correct errors, and every page should include the ability to return to the system's core location, guaranteeing that the user does not become lost within the system with no easy method to navigate. Different views will be provided for other users, and several access levels will be available. A student, for example, will only be able to see their information and the information of their classmates, whereas an administrator will have access to all users' applications, applications and statistics, as well as a slew of other benefits. Being a webmaster, It will be viewable from any computer with an internet connection. Allowing admittance from home, for example, is one form of a relationship. This will be more beneficial and accessible than if it had been written in a language with fewer online resources. Rather than relying on the server, any computer can be used as a workstation to install a program.

4.3 SECURITY:

Any framework created ought to be gotten and safeguarded against potential risks. Safety efforts are given to forestall unapproved access to the data set at different levels. A continuous power supply ought to be so that the power disappointment or voltage changes won't delete the information in the documents.

TECHNICAL SECURITY MEASURES

This is related to specialized issues, for example, exemption conditions distinguished during execution. This particular case ought to be customized in the framework itself. Framework blunders are some activities that might make it fall flat during the performance. This is a result of a coherent programming blunder. So, it is fundamental to handle these issues.

INFRASTRUCTURAL SECURITY MEASURES

This is related to PC disappointment, framework crash, and circle disappointment. Actual issues and calamities allude to a perpetual rundown of topics that unintentionally incorporate power cooling disappointment, fire, burglary, harm, and overwriting plate or tape.

ORGANIZATIONAL SECURITY MEASURES

Issues happen in association because of the simultaneous execution of the framework. Anticipation of work turnover is one more safety effort connected with the association.

PERSONAL RELATED SECURITY MEASURES

This security is worried about offering protection to the people creating and utilizing the framework. This is presented by giving a username and secret phrase for every single individual using the framework. Foundation of Informatics and Correspondence Online Affirmation

4.4 Feasibility Study:

Online Admission System software has vast features and facilities installed to guide fresh higher secondary graduates to enroll to their selected universities. Using advance framework Laravel and applying securities through PHP and ajax validation. By building such unique software and helping students we will not only reduce the stress of admission exams in our country. Building such software its estimated 10,000 takas overviewing the advanced Framework and notations used.

CHAPTER 5: CONCLUSION

5.1 FUTURE SCOPES:

The future extent of this undertaking is extremely wide Not many of them are: - This can be executed quicker than expected for legitimate confirmation process - This can be gotten to whenever anyplace since it is a web application given just a web association -The client had not had to travel a significant distance for the affirmation. Their time is likewise saved because of this computerized framework. One part, known as the lab unit, requires a computer system in order to boost performance. In this system, we tried to create a user-friendly application. We can modify our system on a daily basis as user requirements change. in future, we want to incorporate the following statements into our system. We can provide a report on student attendance. We may write a report with the data result.

5.2 CONCLUSION

Being the principle, we have made in PHP, this framework has demonstrated more troublesome than initially envisioned. While it might sound easy to finish up a couple of structures and cycle the data, considerably more is associated with the choice of candidates than this. Each time progress was made, and includes were added, thoughts for extra elements or strategies to work on the ease of use of the framework were made clear. Moreover, adding one part implied that one more required highlight was presently conceivable and adjusting and finishing these necessary elements with the thoughts for improvement and recollecting all that must be done was a venture in itself. Troubleshooting can once in a while be a generally straightforward process, or instead, figuring out what you should investigate can be. Since countless such pieces of the confirmation's framework are incorporated into each other, assuming a mistake happens on one page, it very well might be a show mistake, for instance; it could be the data isn't accurately perused from the data set; or even that the data isn't accurately put away in the information base at first, and every one of the three should be minded each event. This dials back the process and can be disappointing on the off chance that the apparent reason for an issue isn't clear at first. The language utilized should be basic and straightforward, and similarity is principal. If this framework was not planned as a completely online application, it could never have been feasible to reproduce its present status of versatility. Generally speaking, the framework performs well, and keeping in mind that it does exclude the elements as a whole that might have been wanted, it satisfies introductory hopes. Most of the incorporated highlights work faultlessly, and the mistakes that exist are minor or graphical.

CHAPTER 6: REFERENCE

- The PHP Manual-www.php.net.
- PHP Manual-www.w3school.com.
- PHP Manual-www.9lessons.info.
- Wikipedia.
- A press Beginning PHP 5 and MySQL 5 From Novice to Professional 2nd Edition.pdf.
- https://www.du.ac.bd/
- https://www.buet.ac.bd/web/#/
- https://bu.ac.bd/
- https://admission.iutoic-dhaka.edu/
- https://www.aiub.edu/admission
- https://admissionckruet.ac.bd/
- https://www.cuet.ac.bd/admission
- http://admissions.northsouth.edu/