**BACKGROUND STUDY**

Student admissions are an essential element of any institution's operation because it is what keeps a university going or up and running because of its prospective students. Admission of students is one of the most significant operations carried out within an institution because a university or college cannot exist without students. It is critical to recognize that a poor admissions system means that only a small number of students get admitted to the university or college of their choice, or that there is an excessively slow response time. It is critical not only for the institution, but also for the candidate.

The admission rate in Botswana continues to increase as more student’s progress from high school to tertiary institutions. By the academic year 2014/15, it was calculated that 25 825 learners were enrolled with colleges having a share of 39.2% and Universities having a share of 37.9%. With a slight decrease in the transition rate of the academic year 2017/18 compared to academic year 2016/17 of 9.5%. Enrolment in 2017/18 was standing at 59,243 with students admitted at public universities and 11 299 in private institutions. Studies have shown that there is an increase as the numbers continue to rise from 47,889 to 53 450 students admitted. Likewise, a lower transition rate indicates a low share of students progressing due to various reasons such as limited intake capacity of the tertiary education system.

Due to the strict selections caused by the availability of spaces in varsity, costing Botswana a lot of potential talent. The situation is also made worse in view of very few places available. Sadly enough, tertiary institutions cannot even admit even a quarter of applicants because of inadequate facilities, even worse the government facing economic recessions makes it harder for students to even get sponsorship even when the students meet the set requirements of the university, sometimes they are never lucky. Statistics show that the year 2016/17 the government was able to give full sponsorship to 38 806 Batswana students. Based on the statistics by year 2016/17, 30.19% of students managed to qualify and gain admissions into the university of their choice. The question that remains is what happens to the 69.81% remaining is anyone’s guess. This project is directed towards that 69.81% that struggle to get admissions.

Off current in Botswana the current admission process requires the prospectus students fill admissions online or even apply manually at schools. The problem is if a student wants to apply to more than one school of choice do they have to go to schools to get the admission letters then submit them, this sounds costly to them. The effectiveness of this method shall be talked about as we proceed with the project.

**PURPOSE**

The purpose of this project is to make tertiary admission application process a more conducive and easier one. With this project its aim is to design a system where our prospectus students can apply once to several institutions as well as have the privilege of applying for sponsorship.

**LITERATURE REVIEW**

In the last decade we have seen tremendous growth in the use of mobile phones by not only the public but by students in the higher sector, with students being able to navigate through the device and use them to their advantage. The immense availability of mobile devices offers an opportunity for the students to integrate into the educational sector by looking up different varsity constituted In one application system that gives them an opportunity to apply for courses and sponsorship at once. To come up with a solidified proof that indeed the poor admission system is a challenge, a Questionnaire was conducted and response from intended audience. From the Questionnaire 16.7% of prospective audience were able to gather information about courses through the internet which proves technology is not being used to its maximum. According to ‘In the absence of a ‘unified’ or ‘Cluster system’ of admission test, students have to buy forms of different universities. Not being certain of getting admissions to the university they want to study in.’ when we compare the above statement to what is currently happening with the application process of tertiary institutions they are facing the same problem. It is not by doubt that a unified system which we are bring forth will save the students the worry and time of filling multiple forms manually. Infact, an opportunity of having to submit their applications to more than one institution will increase their chances of being accepted. Although some institutions have their own websites it is very important to acknowledge that most of the websites are not student friendly based on the fast that they are difficult to navigate and the only solution is a unified student application system

**PROPOSED SOLUTION**

The intended solution brought forth by the system to the current system that involves filling forms manually for different institutions, is the use of a common application which will allow for students to fill admission forms once and apply to multiple institutions of choice.

**AIM & OBJECTIVES**

-To allow for filling of application letter and sponsorship letter

- Give users opportunity to submit applications to multiple institutions at once.

**OUTCOME**

-Increase chances of one getting admitted to a tertiary institution

-To bring tertiary institution application of all tertiary institutions in Botswana to a common interface.

**PROJECT SCOPE**

This document presents a detailed description of the Moithuti Application system. It explains Features of the system, what the system will do. The project deals with various functionalities in application process, with an idea of implementing a proper system that can be used now and in the near future. Our system contains many operations such as opening account, applying for courses, applying for sponsorship. Within the system design/ model it deals with a student applying for a course from schools of their choice as well as sponsorship by filling in the forms and attaching relevant documents which are then stored in the database and display of student’s details is retrieved from the database tables.

**PROJECT BRIEF**

The overall problem addressed at the problem statement is to develop an improved platform compared to the old existing technology of using internet browsers to lookup different college websites, so this application is to assist prospective students to find available courses under each institution and apply for the course of choice along with sponsorship. The problem is being addressed by carrying out a variety of elicitation requirements.

**PROBLEM STATEMENT**

Off current in Botswana, usage of new technology in schools is very much limited. Schools or in general senior schools have computers and they are mostly used to teach computer related subject and not used for any administration purpose or assist students in applying for courses from their school of choices. This has continued to pose as a major concern as young people continue to face high demands in a society which is characterized by a quick rate of change in the labor market due to the dormancy of globalization, use of technology in education system, increased dissemination of information, and numerous opportunities that continue to avail themselves. In today’s world making a career choice is seen as a crucial phase in life and young people have a great responsibility for their own future career but at the same time the schools in general often lack strategies to increase young people’s knowledge and to support them in their choices regarding their futures. With the recent outbreak of covid 19 which has impacted the world at large we have seen many activities being halted and being stopped, and one great example is a career fair in Botswana. Despite this challenge, students can apply to as many institutions as they want provided, they qualify. By this they must fill each form belonging to the tertiary institution, some schools even require students to pay for admission fee even when they are not sure of being admitted. This is time consuming and costly. With this much information gathered we evaluate the impact of limited technology and poor admission system at hand.

**PROJECT OVERVIEW**

The project that is going to be developed is about the mobile application system for all university and colleges. As an overview, the system will be used by the prospective student for applying. The system administrator can handle all details and information about a student, tertiary institution, financial aid, and course catalogue. The details include tertiary details, course details, student personal details and to mention a few. In case of current system, they need a lot of time, and manpower as the process is done manually. Here, almost all work is computerized, and the accuracy is maintained easily. It is the responsibility of the administrator to insert, update and monitor the whole process that will be taking place. Mobile application system is a software which is helpful for students as well as the tertiary institutions. All data are stored securely on a database (MYSQL servers) managed by the System administrator and ensures highest possible level of security. All these problems will be solved by using mobile application system which is intended to provide an automation of student’s ability to navigate the system to find all the relevant information regarding the course of their choice as well as having the privilege of applying to their desired schools and sponsorship, thus reducing paperwork.

**REQUIREMENTS**

The purpose behind this report is to analyze the functional and non-functional necessities of user’s requirements towards the development and continuously improvement of the Moithuti Mobile App which is very important. The details provided will be based on the functional requirement specifications that can be found on the portable device of the Moithuti mobile application. Our requirements were gathered by acquiring admission letters of admission forms for tertiary institutions in Botswana. With these admissions we know what common information the tertiary institutions require when filling forms.

**REQUIREMENT SPECIFICATION**

The system we decided to create is called Moithuti Mobile application. The goal of this project is to create a system that would act like an automated version of the manual student application system, with the goal of reducing human work while retaining accuracy. The system we are creating is designated to have four access mode or actors which is the User, Institution, Financial aid and the system administrator. The administrator will be managing the system and be accountable for the whole process. To have access to the system, the application should be free to download from a mobile store provided there is access to the internet. The proposed system will provide users with relevant courses to register for along with the course catalogue. For the system to do so, it allows for the user to have an account, which means they must firstly log in if they already have an account or sign up if they do not.

To save time of the prospective users and to have information at the tip of their finger, the system will include a layer with various tertiary institutions along with respective courses offered categorised, which the user will navigate through at their own comfort time and get obtain information about the course that they desire and know where their course of interest is offered. The Moithuti mobile application will provide a rapid, dependable, and user-friendly mechanism for students to use when applying for a course of their choice and institution, with the system having a form that requires them to attach relevant documents such as their transcripts and a copy of their national identity card.

Once the institution has reviewed the application the approved prospective student will be sent admission via their email address that they would have provided when filling in the application form. The system is also convenient and effective in a way that it will allow approved students to apply for government sponsorship, but for self-sponsored students their process will end with them having received their admission letter. For those applying for government sponsorship the system will also have a layer that would allow them to fill in the application form and attach necessary documents.

The system will allow all applications forms filled in by the prospective students to be saved securely in a database and only the administrator will be able to access it. The database should also entail of the prospective student’s full names, email addresses, cell number and passwords. The tertiary institution details and course details.

The system will be programmed in such a way that it can be used any day and at any time to prevent inconveniencing the users who will desire to use the system at their preferred time. This will also ensure that the Moithuti mobile application will attract more users thus helping a lot of prospective students to avoid the tedious process of manually applying for tertiary institution.

**Functional Requirements**

The intended Moithuti mobile app has 4 core functionalities that will play the most impact of the system to the users. They are listed below:

* User must be able to download the Moithuti mobile application from Playstore.
* User can log in to the software or sign up.
* User must have a device that has the capacity to access internet.
* User should be able to change password.
* User should be able to use the application as a search directory to derive information about institutions.
* User should be able to manage their applications.
* Administrator should have a real time update on the system.

These functional requirements will define how the Moithuti mobile app will function;

1. User Login

Home page entails of the:

Search button

1. Courses category content
2. Institution’s content
3. Email content
4. Campus information
5. About the institution
6. Sponsorship application content
7. Contact details of each institution
8. Terms and conditions
9. Moithuti Application privacy agreement
10. User Logout

**Non-Functional requirements**

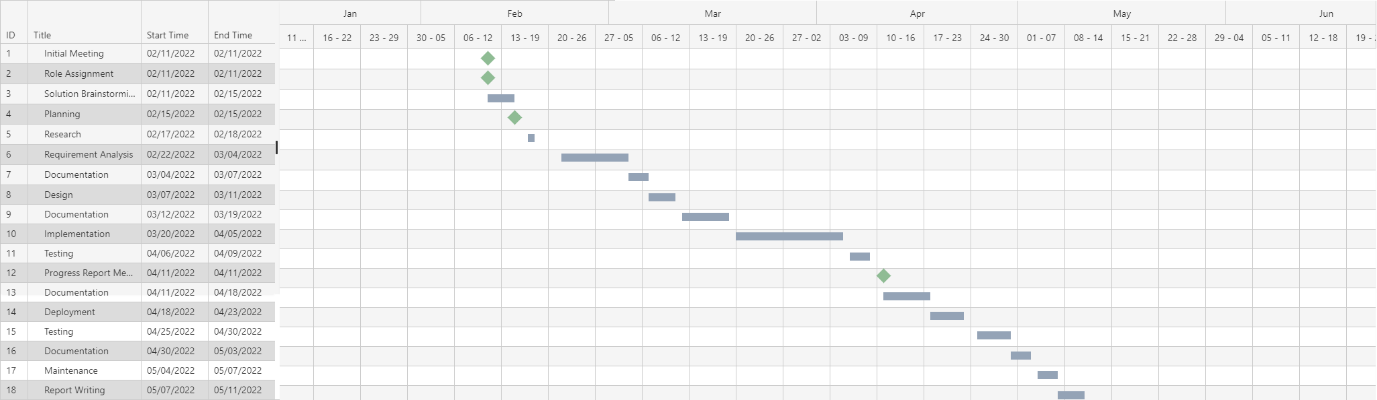
1. The system should be readily available for download.
2. The system performance and response time must be fast for instant information.
3. The system should have a layer of robustness which means that the stored documents and login credentials will always be available and accessible.
4. Application should be able to satisfy all user requirements mobility functions.

**REQUIREMENTS MASTER LIST**

Below is a section that identifies functional and non-functional requirements:

|  |  |  |
| --- | --- | --- |
| ID No. | Functional Requirement | Non-Functional Requirement |
| Req1 | Student must download the Moithuti mobile application to their device. | Application shall be readily available to download from Android Google Playstore. |
| Req2 | Student can install the system into a phone. | System should be available for download. |
| Req3 | Student must sign up to create account and get access to the app. | Account creation should be easy and straightforward to execute. |
| Req4 | Student clicks the sign-Up button. | Button redirects user to the sign-up form. |
| Req5 | Student should fill the sign in form. | Form should be clear to understand and easy to use. |
| Req6 | Student clicks the register button | The button redirects student to home page. |
| Req7 | Student must login to the system. | The login process should be fast. |
| Req8 | The system then validates the login details. | The application should save credentials of the accounts. |
| Req9 | The student receives a login successful message. | A quick pop-up message appears to the user appears which is easy and clear to read |
| Req10 | Student should be able to reset password. | The system should allow students to change passwords. |
| Reg11 | User who already have accounts can click forgot password button. | System should provide the user with the forgot password button to enable them to retrieve their account. |
| Req12 | After successful login, Student must be able to navigate through the software. | Navigation should be easy. |
| Req13 | User should be able to deactivate account | System should allow user to deactivate account |
| Req14 | Student must be able to view the home page. | System should provide on-the-go information. |
| Req15 | Student must be able to view the course catalogue. | System should be user friendly. |
| Req16 | Student must be able to view course catalogue in real-time. | The system shall update the course catalogue. |
| Req17 | Student can click institution button. | Button redirects to the institutions page. |
| Req18 | Student should be able to click course button for more information. | System button should respond in time for instant information should be at the fingertips of users. |
| Req19 | Student should have access to the About page of each institution. | Application should satisfy mobility. |
| Req20 | Student should have access to the contacts of institutions in cases of clarity. | Application should satisfy versatility. |
| Req21 | Student can click the apply here button to register for their desired course. | The button redirects the user to the institution Application form. |
| Req22 | The student should fill in application form. | The form should be convenient and easy to fill. |
| Req23 | Student should be able to attach necessary documents. | System should allow attachment of files and documents. |
| Req24 | Student should be able to click send the submit button to send their application. | The submit button should be responsive and fast. |
| Req25 | User can click cancel button to cancel the application. | System should provide the user with an option to navigate back. |
| Req26 | The student should receive the  ‘Application successful’ message. | A quick pop-up message appears to the user. |
| Req27 | - |  |
| Req29 | Student must be able to retrieve their application. | System should provide security backup incase the data gets lost or damaged |
| Req30 | Student should be able to go back to a certain step in cases where the device shuts down. | System should save all the progress of the user before abnormal happening. |
| Req31 | Student should be able retrieve and submit course application to administrator’s email. | System should give access to the administrator to receive application emails. |
| Req32 | Student shall have an option button to apply for sponsorship. | The button will redirect the student to the application form. |
| Req33 | The student shall fill the application form. | System should allow the form to be edited. |
| Req34 | Student should be able to attach required files on the application form. | The system must provide a paperclip link to indicate that files can be added. |
| Req35 | System can be accessed by the student and administrator only. | System should provide Security and Privacy Policy. |
| Req36 |  |  |
| Req37 | Student should be able to access the application anytime, any day. | System should be reliable and constantly available. |
| Req38 | Administrator information should have real time update. | The system should be able to backup data. |
| Req39 | The system allows user to log out | System must have a log out button. |
| Req40 | User should have internet |  |
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|  |  |  |

**GANNT CHART**



**USE CASE DIAGRAM**

STUDENT

TERTIARY INSTITUTION

SYSTEM ADMINISTRATOR

FINANCIAL AID

**ACTIVITY DIAGRAM**