ADDIS ABABA SCIENCE AND TECHNOLOGY UNIVERSITY
COLLAGE OF MECHANICAL AND ELECTRICAL ENGINEERING
DEPARTMENT OF SOFTWARE ENGINEERING

System Analysis and Modeling
          Group project (Phase one-Introduction)
Matric and college preparation system
Group members

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1.3 Motivation

Most of the Ethiopian high school's teaching and learning process is bounded and restricted inside the class and only around the local resources. So students these attend such a schools have no much information what is happening outside the school and what is created, discovered, what technology are available to support the learning and teaching process. Beyond this no such a psychological, motivational preparations and advices are given to them via professionals. They didn't get access to resources, skilled instructors, and any updates or news about the examination.
That is why we development this system. Because this is our responsibility as software engineer who pass through above problems.

We born on a farmer family with where their life depends on farming, yet they cannot make a single difference, their life is hand to mouth as the matter of fact our life doesn't seem different than the way things are. if we don't do something about it. The life we have been through are really not to be told. Even as the history. Sometimes shortage of cereals sometimes shortage of products useful for preparing meal learning about balance diet without affording it is like a pain in the neck. no matter what they do the result is the same. now we are on our way to its end. soon we and people like as won't suffer any more like those days we have been through. and our brothers and sisters will have a chance to prove as equal as the others. they won't suffer any longer like we do because of poverty and lack of technological products. And this system for sure it will resolve the problem from its root.

The life of farmers in our country is like living in grave while you are alive. farmers produce vast products and nowhere to sold the products we produce through mud day and night. Farmers pay hounds of birrs to remove herbs either using man power or. Example: we sold tasa (local measurement) of teff for 15birr to merchants and brokers .and merchants and brokers sold for tasa around 50 birr yet we buy another products from merchants they are too expensive compares to with ours even though those products are produced by other farmers when our product reaches to them still merchants and brokers are involved.

Agriculture is the backbone of the country yet its methodology is same as the period of before two or three thousand years ago. As we observe almost all of the farmers are poor and even, they can't afford to have food nor able to cover their children's school expenses in free schools like pen, exercise book, reference books uniform etc. this is not full description of their life, even it is not worth of introductory. Most children are illiterate because they can't afford materials that are necessary, even they start school they would not able to make it. they quit class and they migrate to foreign countries in order to support their family financially. Even they want migrate legally they don't have certificate. They walk through hell to have just normal life like a human.as example you can take most of immigrants to Libya and Arab countries most of them are younger at age of 17-30.all most all of them their parents are farmers.

1.4 Scope and limitation of the project

1.4.1 Scope of the project

Our system main objective is to help Ethiopian high school students in their matric and college preparation.
The system allows the students to:
- Register and login into the website in order to access the features of the system.
- Access all text book of both grade 11 and 12
- Purchase helpful references book for the exam.
- The system also announce the schedule if there is any change regarding to the national exam.
- Get some advice from experienced university students and motivational speakers instructers, advaisers to prepare as expected to achieve the goal
- Mechanisms to handle some university challenges for the future.
- Access the list of all universities with there overview on there status suh as available fields of study, ranking, backgrounds, student acceptance capacity, and embed their links

Since our system is specialy for the grade 11 and 12 students we cooperate with the ministry of education to support us on the issue related with resources and information we need for our system.

The main obstacle to deploy Matric and college preparation system in most part of Ethiopian educational institutes is internet access. Beside that the student may no have the access to technological equipment that enables to access the system like that of computers, smart phones and there is not awareness of the technology and soon. These are the external limitation which makes difficult to apply the system on all part of Ethiopia.

The system for now it will provide the national exam questions, it will not allow the students to work the exams online, students unable to sownload the pdf books what they want, but in the future we will add this feature include timer. This are some internal limitation that will be included in the feature.

1.5 Objective

1.5.1 General objective

The general objective of this project is to create modern,fast data processing,easily accessible and simple educational website for Ethiopian students for their matric and college preparation.

1.5.2 Specific objective

• To provide updated news regarding the national exams from NEA (National Assessment Agency) or NEAEA (National Educational Assessment and Examinations Agency).

• To provide different useful resources like reference books,text books,national exams, video tutorials that helps in their matric preparation.

• To allow student to communicate with different experts,advisories and instructors, whom can help in their studying time, give enough information about what field to join and why? depending on their talents.

• To provide any information about the details of the college without having any difficulties.

1.6 Methodology

1.6.1 Data collection and methodology

Data collection

We will use three methods of Data collection method for our project to get data that are use full for making reliable Matric and college preparation system.These are interview,questionnaires and observation.Selecting all necessary information collected by the three methods from grade 11,12 and university senior students. The aim of the survey was to understand what kind of feature does the students wants to be included in the website.

Methodology

  1. Direct Observation

Observation allows us to gain information that can not be obtain by any other fact finding techniques.The main aim of this method is we go to the different educational sites and discovers the function of the system.By this method we can get the direct knowledge of the activities, operations, processes and features of the system.

  2. Interview technique:

Personal interview is a recognized and most important fact finding technique.In this system we gathers information from individual through face to face interaction.Interviews are used to find the facts, verify fact, clarify facts, get the customer involved, identify the system requirements and know all the options.

• Why we carried interviews?

Interviewing the students helped us to get a more vivid and clearer picture of the system. It also help us to see the drawback of current educational websites.Through this method we were able to closely ask and collect information we needed to develop the system.

  3. Questionnaires

They are useful when the system analyst require to collect information from a large number of people.It is useful in situation when interview on individual manner can not be conducted.

There are two types of Questionnaires we are going to use in this project :–Open Response Based and Closed Response Based.

   • Open Response Based:–It requires no response direction or specific response.This form is also used to learn about the feelings, opinions, and experiences of the respondents.This information helps in the making the system effective because we can offer subsequent modification as per the knowledge gained.

   • Closed Response Based:–The objective is to collect the factual information of the system.In this case the respondents have to choose from a set of given responses.Thus the respondent can express their liking for the most favorable one from possible alternatives.The questions can be Fill in the blanks, True or false, ranking, MCQ etc.

`1.6.2 System design and analysis tools`

Hardware Requirement

We used the following hardware for our development environment:

   • Keyboard, Mouse,CPU,Memory (256MB RAM),Network card (1GB Ethernet), Hard disk.

Software Requirement

We used different tools to develop our system. Among those some of the listed below:

   • HTML
   • CSS
   • JAVASCRIPT

Browser

   • Chrome

`1.6.3 System development tools`

   • Visual code studio
   • Notepad++