

**COMPUTER SUPPORT FOR ENGLISH SENTENCE BUILDING SKILL  
DEVELOPMENT**

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## DECLARATION

In accordance with the requirements of the degree of Bachelor of Computer Science in the Division of Computer Science and Engineering, I am presenting this thesis paper entitled, 'COMPUTER SUPPORT FOR ENGLISH SENTENCE BUILDING SKILL DEVELOPMENT'. This project has been performed under the supervision of Dr Yousuf Mahbubul Islam.

I hereby declare that the work submitted in this thesis is my own and based on the results found by myself. Materials of work found by other researchers has mentioned by reference in the end of this paper. This thesis, neither in whole nor in part, has been previously submitted for any degree.

Signature of  
Supervisor  
(Dr. Yousuf Mahbubul Islam)

Signature of  
Author

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Author: Snigdha Saha

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## **ABSTRACT**

To construct a sentence things like selection of words, meaning or context are needed. However it is found that a large number of students, even after taking twelve years of English as a subject are unable to construct sentences properly. Thereby the objective of our project is to explore and find a convenient solution- how computing technology can be used to help the students to improve their sentence building skills.

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## CHAPTER I

### INTRODUCTION

#### 1.1 BACKGROUND

Today English is not only an essential medium of communications but also it is now considered as a technology because of its wide range of practices throughout the world. But in Bangladesh people especially the students who are learning English, struggle and face a great deal of difficulties when they are reading or writing. And the topic of our thesis which is *Computer Support for Sentence Building Skill Development*, which we have selected in the light of this problem, is to create a helping hand for those students who are very poor in writing, especially who make spelling mistakes and grammatical errors.

So to work out these problems we were planning to use such a technology through people will be easily exposed to learn English, a device that is very easy to use and people have interest in it. And we think, mobile phone can be a very handy option by means of our instruction- to write proper English sentences can be effectively used by the people, especially for those students, who always have a keen interest in mobile. Now a day we see even somebody does not have money in his moneybag but he does carry a mobile because life without a mobile today is impossible to think.

#### 1.2 PROBLEMS

The problems we have found so far with the students in our country are:

- Students are the victims of our impractical traditional education system and didn't get the chance to learn and practice English in the light of

real life.

Students most of the times they feel shy to speak in English in front of people for lack of practice in and out side the classrooms. The chance to speak in English is also not given to the students by their teachers as their (teachers) English is also poor.

- Even after studying in schools and colleges for twelve years many students do some common silly mistakes over again and again. For example: spelling mistakes, proper use of articles in sentence etc.
- As there has been no practical method of learning English has been applied in the curriculum by the government, students get a limited sense of English in order to apply it when they are talking and writing.
- As the scopes are limited in our country students do not get motivated in our country/ society to develop their skills in English.

### **1.3 Objectives and scope**

The objective of “computer support for sentence building skill” is to enhance the power of writing grammatically correct English sentences without any spelling mistakes and with understandable meaning. It makes the learning process easier and automated because it uses peer-pressure. The system provides a very effective method of improving writing skills in a very short time. In addition, it improves the skill without the help of any teacher.

The scope of the project is to provide easier method of improving sentence building skill for the people of every stage and age. Mobile technology is getting popular all over the world and day by day its message circulation is getting cheaper, less time consuming and an easier way to exchange views and ideas. This system will use mobile as a “short message service” to improve the sentence building skill. So, any one who has a mobile phone can take part in this system.

## CHAPTER II

### METHODOLOGY

The procedures or methodology for this project “Computer Support for Sentence Building Skill Development” is described below,

#### 2.1 Analysis

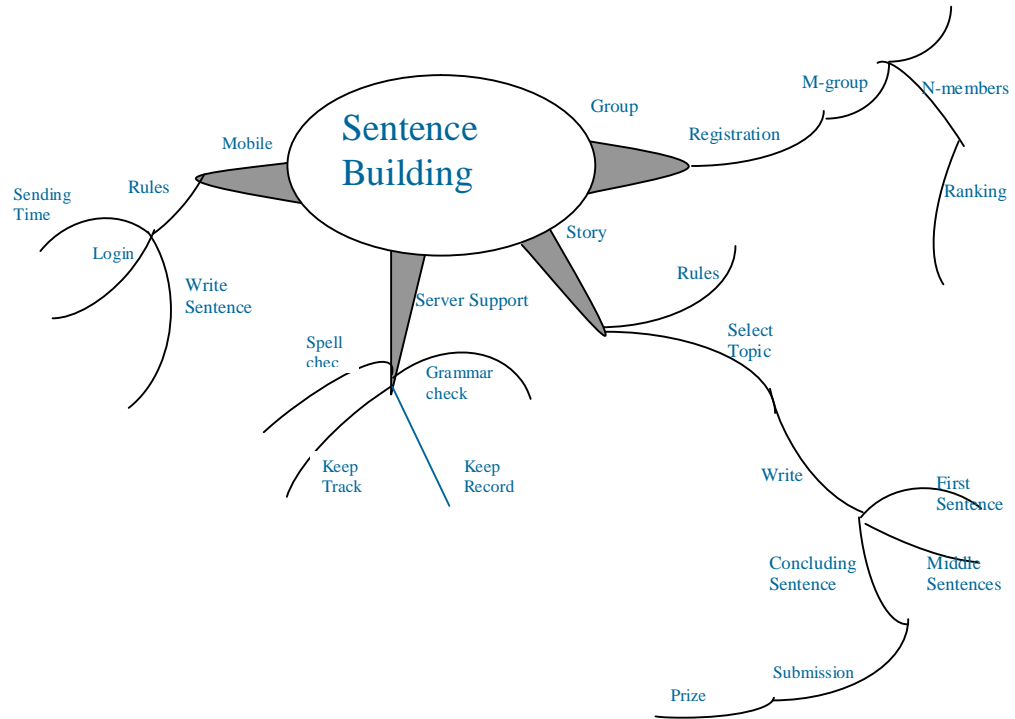
To complete the project we will follow the SDLC process. One of the phases of SDLC is Analysis. In this phase we will carry out the followings,

1. First we will try to find out what type of mistakes students usually do in their writings. For this purpose we will gather some real life examples from some exam papers of the students.
2. We will collect a handful amount of English exam papers from EL-Pro (English Language Program in BRAC University) so that we can understand the current state of English of the students regarding their skills in English.
3. We will take interviews of The Director and English teachers of EL- Pro so that we can analyze what type of problems students are facing while writing English sentences.
4. After having this information we will find out the drawbacks of our education system.
5. We will review the drawbacks and will try to find out a suitable solution to overcome the lacking of the students in English language.
6. We will apply some effective system so that students get motivated to learn English by competing with each other and we will also try to encourage their self learning as well.

## 2.2 DESIGN

For the design phase we first draw the whole system in a mind map.

Figure 2.1: Mind map of proposed solution



## 2.3 IMPLEMENTATION

The third phase of SDLC is **implementation**. In this stage we will carry out the followings.

We will code the system according to the design specification. The implementation of the system will be divided into two parts. First, we will implement the prototype and it will be tested. After that correcting the problems we will develop the final software. Then we will check the new

system and will install the system. At last we will prepare the documentation for the system.

## **2.4 RESEARCH**

At the very beginning we decided to check few English exam copies to find out the errors that usually students do when they write. So we went to ELPRO [English Language Program] office at BRAC University to collect such documents and after checking the exam papers we have figured out a number of common mistakes made by the students in their exam papers. We studied those papers to sort out their lacking in English. Initially we wrote those sentences, students wrote in their exam papers in Microsoft word to see what type of mistakes the MS Word is showing. MS Word showed nice performance in spelling mistakes but it was full of grammar mistakes. So we decided to find out grammatical mistakes more precisely. We discussed these problems with the faculties of English department of BRAC University to sort out the mistakes students made in the exam papers.

I am attaching the photocopy of those exam scripts with this documentation on those we did our research.

The typed copy of those scripts are given below. The MS Word marked red lines for spelling mistakes and green lines for grammatical mistakes

**Document 1:**

The most important day of my life

when published my S.S.C result that day was the most important day for my life. I didn't forget that's day. That's day I was very afraid because, I think that's result was very important for me. That's was the first time when I got the very good result. My GPA was 4.63. I felt very happy when I know my good result. Every one congratulated me. I felt that's day was very nice day for me. I never forget that's day.

**Document 2:**

The most Important Day Of My Life

I think today is one of the most important day of my life, as on this day I am going to giving a English test. I heard from based on this test there will be a English course for us which is similar to British Council courses. So, I am very exciting about this course & hopefully it will not make us bore.

**Document 3:**

Hi Barbara,

hope you are very well there. I am well here too. In your last letter you wrote me about how you spend your free time you also asked me about mine. Well, actually I have not enough time to be free. That's why I can not go to play in club like you. But my favorite pastime is book reading and listening music. I love to read novels. In music I have an interest from my childhood.

That's all about my pastime.

Take care

Bye for today,

your friend

**Document 4:**

The most important day of my life

Everyman have a important day of his life. Like them I have also a important day in my life. The day is 10<sup>th</sup> September, 2005. This day is my turning point. I was always looks like not nice. So my hair style was changing day by day. I couldnot take it as usual. So to keep this unknown I always wore a cap. For this I felt so nervous, felt worried and kept me alone. But 10<sup>th</sup> September our Campus Super called me and told me somethings. First he asked me why I wore cap. Then I told him this problem. Then he told me that I have to accept the truth. Loosing hair is truth. One cannot stop them. He told not to fell nervous and accept the truth and remove cap. After his words in that day I removed cap and now I am not worry about that. I have accepted the truth. It was really a mamorable and important day in my life. I could not forget it overnow.

**Document 5:**

5<sup>th</sup> Oct, 2005

Dear Barbara,

How are you. I had just received your letter. I knew from your letter that you had just joined a new club. In club you playing computer games and it's exccellent. You also want to know what I do in my free time.

Now I going to tell you. In my free time I listen to music and reading story books. You will think it's one kind of boaring but it's really enjoyable past time. Book is your only friend which is always with you. This is all for today. Take care of yourself.

Bye  
Emi.

### **Document 6:**

Every person has some memorable day. And that day which he/she always bear in mind. Among those memorable days, at least one day may be most important. Because of being human I also have an important day in my life.

It was 5<sup>th</sup> June 2001, in that day first I have driven motorcycle. Our driver and I went to the playground of our school. At first he started the motorcycle and drove it. And he showed me how to drive the motorcycle. Then I was trying to drive the motorcycle. But when I change the gear to the first then the motorcycle had stopped. And again I tried to start the cycle. But this time I was failed. But some times later I first do drive the cycle. At that time my heart was birthing very first. And my blood flow up to down. So, this feeling was very good. So I will never forget that day because it was my first motorcycle driving day.

### **Document 7:**

#### The most important day of my life

Every \_ is important to me. But some days are really important. It was 15<sup>th</sup> May in 1999. In that day I first saw my girlfriend. I went to a book exhibition. She also came. We don't know each other. My girlfriend lose her beg in a bookshop and I was the saim shop. I found it. I got her phone number in her beg. I send her beg in her address. She was very much great full to me. When she got her beg make call and gave thanks. I always remember that day, because I love her very much.

### **Document 8:**

Now I'm a student of BRAC university in 3<sup>rd</sup> semester. To reach that positions I had work heard for last 12 years. In these 12 years I also had to pass or faced two very very important exam. HSC examination and SSC examination. If loosed any of them it would never be possible to fullfill my life target. I gave my SSC exam in 2001, it was my first exam under Bangladesh Board. So I was really new experience for me. In my life I think the most important day was that day when my SSC result came out. It was really very important day for me. From the morning I was in very tence I can't think anything. Accept my my resul. That day I took my all regular prear. When it was 4.pm I went to my school and my result. And I had a lond breat with saying that



ohh! God. I pass my exam with goo GPA. I think that was very important day for me because now I'm here because of that day.

**Document 9:**

The most important day of my life

I am a student of BRAC University. Now I am studing BBA in MGB department. I have got an important day in my life. This day is also memorable day in my life. The day was my SSC result day this is the result which I am wating for ten years. After studing ten year I got a very good result. So, this result was very important in my life and I also enjoied this day very much. Because my result was good. So all of my presents, friends appreside me very much. I am not forget this day. In this day I bought a large amount of sweet and I gave everyone, for my good news. Usually I think this day is very most important day in my life.

**Document 10:**

Dear Sam,

How are you? Hope you are fine. I got your letter. Thanks for sending me such a nice letter. Oh! Please don't talk about my journey. It was just horrible. I was just stuck on jam for an hour. Then my car was going out of order. It took three hours long to reach my home.

Sam photoes are very lovely. Please send me two photoes, where I was wearing a hat in front the river and you are holding my hand. The second one is I wore a green watch, which is your's watch. Oh! sam I really sorry. I forgot to return you, that watch. The watch is with me. I will send it to you next month. My uncle will gone to your house next month. I will also send you some gifts for your parents.

I hope I will able to come to your house on september. I would like to spend with you on your uncle's farm house. I don't know I like farm house a lot when I was leid I just often see a dream to going on farm house. So I think it is the time to make my dream come to true. Know more for today. Take care.

With love  
Sabreena

**Document 11:**

Every person have a personal life. They should enjoy that one. I have the most important day in my life. It's my mom birthday. It is 26<sup>th</sup> april. I realy enjoyed that day because this day is my life part.

**Document 12:**

The most important day of my life is my parents wedding anniversary. I'm only one child of my parents. My parents marriage anniversary is 27 January. I never missed this day. I'm always remember this day. I'm enjoy this day very much. I wish my parents beginning of the day. I always try to give them surprise when they are happy for my surprise then I also feel happy. I love them very much. I always want to see them happy and I always try for that. If they are not happy then I feel very sad. My parents are my role model in my life.

**Document 13:**

Every person have some memorable day. And that which he/she always memorized that day. But every person have a most important memorable day. So because of I am a human. So I also have a important day in my life.

**Document 14:**

I was 5<sup>th</sup> June 2001. That day was my first driving motorcycle. I and our driver went to the play ground of our school. At first he started the motorcycle and drive it. And saw me how to play the motorcycle. Then I was trying to drive the motorcycle. But when I push the first gear than stop the motorcycle. And again I started the cycle. But this time I was fail. But some time later I first do drive the cycle. At time my heart was birthing very first. And my blood follow up to down. So his feeling was very good. So that day I never forget because it was my first drive the motorcycle.

**Document 15:**

Every person have a important day. So I also have day, which is very important to me. This day is my Birthday. Because that day I came in this world. And that's why I can see the beauty of the world. Always I thanks my mother cause she bring me in this colorful world. In birthday when every person who are involve in my life if they wish me then I feel very happy. I enjoyed my birthday always. It is so special day for me that's why my Parents always give me cute gifts and Party. My birthday always will be important of my life.

**Document 16:**

Science invented many important things for leading a better life. Telephone is one of the blessings of science. Nowadays we cannot imagine our life without telephone. We can communicate with people whose are living in another place. We can talk to our friends and relatives directly within a few minutes by the help of telephone. We can share our feelings, sorrows with our friends and relatives by the help of telephone. We can talk to our business partner. We can ensure out contact through telephone. We can know about the different country's.

## 2.5 FINDINGS

The following table shows the summary of these mistakes (for documents 1 to 5):

Table 1: Summary of mistakes for document 1-5

<b>Types of error</b>	Doc-1	doc-2	doc-3	doc-4	doc-5	Total
<i>Spelling</i>	3	1	1	0	0	5
<i>Word missing</i>	0	0	0	0	0	0
<i>Fragment</i>	0	2	1	2	2	7
<i>Wrong word order</i>	0	0	0	0	0	0
<i>Preposition</i>	1	1	0	1	0	3
<i>Plural</i>	1	1	0	1	0	3
<i>Conjunction</i>	0	0	0	0	0	0
<i>Capitalization</i>	0	0	0	0	0	0
<i>Sentence structure</i>	0	0	0	1	2	3
<i>Verb</i>	1	0	0	5	3	9
<i>Unnecessary words</i>	0	0	0	0	0	0
<i>Comma splice / Run-on</i>	0	0	0	0	0	0
<i>Wrong word choice</i>	1	1	0	4	0	6
<i>Wrong word form</i>	1	0	1	0	0	2
<i>Article</i>	0	2	0	3	0	5
<i>Make one word Sentence</i>	0	0	1	0	0	1
<i>Redundancy</i>	0	0	1	0	0	1

Table 2: Rate of error in per sentence (document 1 to 5)

<i>Scripts</i>	Document 1	Document 2	Document 3	Document 4	Document 5
<i>Sentence per scripts</i>	8	3	10	17	11
<i>Mistake pre sentence</i>	1	2.67	0.5	1	0.64

The following table shows the summary of these mistakes (for documents 6 to 11):

Table 3: Summary of mistakes for document 6-11

<b>Types of error</b>	Doc 6	Doc 7	Doc 8	Doc 9	Doc 10	Doc 11	Total
<i>Spelling</i>	9	5	9	5	4	0	32
<i>Word missing</i>	1	0	2	0	0	0	3
<i>Fragment</i>	11	5	6	4	2	3	31
<i>Wrong word order</i>	0	0	2	0	0	0	2
<i>Preposition</i>	0	2	1	1	1	0	5
<i>Plural</i>	0	0	1	2	0	0	3
<i>Conjunction</i>	0	1	0	0	0	0	1
<i>Capitalization</i>	0	0	1	0	0	0	1
<i>Sentence structure</i>	0	0	0	1	0	0	1
<i>Verb</i>	5	2	0	2	4	0	13
<i>Unnecessary words</i>	1	0	0	2	2	0	5
<i>Comma splice / Run-on</i>	1	0	1	1	0	0	3
<i>Wrong word choice</i>	5	0	0	1	3	1	10
<i>Wrong word form</i>	1	1	0	0	0	1	3
<i>Article</i>	1	0	0	0	0	0	1
<i>Make one word sentence</i>	0	1	0	0	0	0	1
<i>Redundancy</i>	0	0	0	0	0	0	0

Table 4: Rate of error in per sentence (document 6 to 11)

<i>Scripts</i>	Document 6	Document 7	Document 8	Document 9	Document 10	Document 11
<i>Sentence per scripts</i>	18	13	14	12	25	6
<i>Mistake pre sentence</i>	1.94	1.31	1.64	1.58	0.64	0.83

The following table shows the summary of these mistakes (for documents 12 to 16):

Table 5: Summary of mistakes for document 12-16

<b>Types of error</b>	Doc 12	Doc 13	Doc 14	Doc 15	Doc 16	Total
<i>Spelling</i>	5	4	1	0	0	10
<i>Word missing</i>	1	0	1	0	0	2
<i>Fragment</i>	0	0	0	0	1	1
<i>Wrong word order</i>	0	0	0	0	0	0
<i>Preposition</i>	0	0	0	0	0	0
<i>Plural</i>	0	0	0	1	0	1
<i>Conjunction</i>	0	0	0	1	0	1
<i>Capitalization</i>	1	0	0	1	1	3
<i>Sentence structure</i>	3	5	5	0	0	13
<i>Verb</i>	1	2	0	0	1	4
<i>Unnecessary words</i>	0	2	0	1	0	3
<i>Comma splice / Run-on</i>	0	0	0	0	0	0
<i>Wrong word choice</i>	0	1	0	0	0	1
<i>Wrong word form</i>	0	0	0	0	0	0
<i>Article</i>	0	0	1	0	2	3
<i>Make one word sentence</i>	0	0	0	1	0	1
<i>Redundancy</i>	0	0	0	0	0	0

Table 6: Rate of error in per sentence (document 12 to 16)

<i>Scripts</i>	Document 12	Document 13	Document 14	Document 15	Document 16
<i>Sentence per scripts</i>	12	5	14	8	9
<i>Mistake pre sentence</i>	0.916	2.8	0.571	0.625	1.8

Table 7: Percentage of error among 185 sentences

<b>Types of Error</b>	<b>No of occurrence in 185 sentences</b>	<b>Percentage of the Error</b>
<i>Spelling</i>	<b>47</b>	<b>25.405</b>
<i>Verb</i>	<b>26</b>	<b>14.054</b>
<i>Sentence structure</i>	<b>17</b>	<b>9.189</b>
<i>Wrong word choice</i>	<b>17</b>	<b>9.189</b>
<i>Fragment</i>	<b>11</b>	<b>5.946</b>
<i>Article</i>	<b>9</b>	<b>4.865</b>
<i>Preposition</i>	<b>8</b>	<b>4.324</b>
<i>Unnecessary words</i>	<b>8</b>	<b>4.324</b>
<i>Plural</i>	<b>7</b>	<b>3.784</b>
<i>Word missing</i>	<b>5</b>	<b>2.703</b>
<i>Wrong word form</i>	<b>5</b>	<b>2.703</b>
<i>Capitalization</i>	<b>4</b>	<b>2.162</b>
<i>Make one word sentence</i>	<b>3</b>	<b>1.622</b>
<i>Comma splice / Run-on</i>	<b>3</b>	<b>1.622</b>
<i>Wrong word order</i>	<b>2</b>	<b>1.081</b>
<i>Conjunction</i>	<b>2</b>	<b>1.081</b>
<i>Redundancy</i>	<b>1</b>	<b>0.541</b>

## 2.6 SOLUTION

### Group work:

To develop our plan to improve the status of English language among the people, at first we have decided that we will create a group like the 'e-groups' we see in the internet, in mobile phones. Anyone of the group will write a text in a mobile and this sentence will be sent to all other group members' mobile phones as a short message service through a common server. It is to be marked that, the output of a group work is always better than any other performance made by an individual, because the scope for exchanging views and ideas occur frequently within a group.

### Constant companion: mobile set

Now a day's mobile has become a part of our body. In the context of our country, may be people have no money in his money-bag but there is a mobile phone in his pocket. Day by day the popularity and user of mobile phone is increasing rapidly. We are always carrying mobile set with us.

### Addiction for text message:

Mobile technology is getting popular all over the world and day by day its message circulation is getting cheaper, less time consuming and an easier way to exchange views and ideas. Moreover, young generation has an addiction to text messaging for aforementioned. That's why we will use mobile SMS to amass write up.

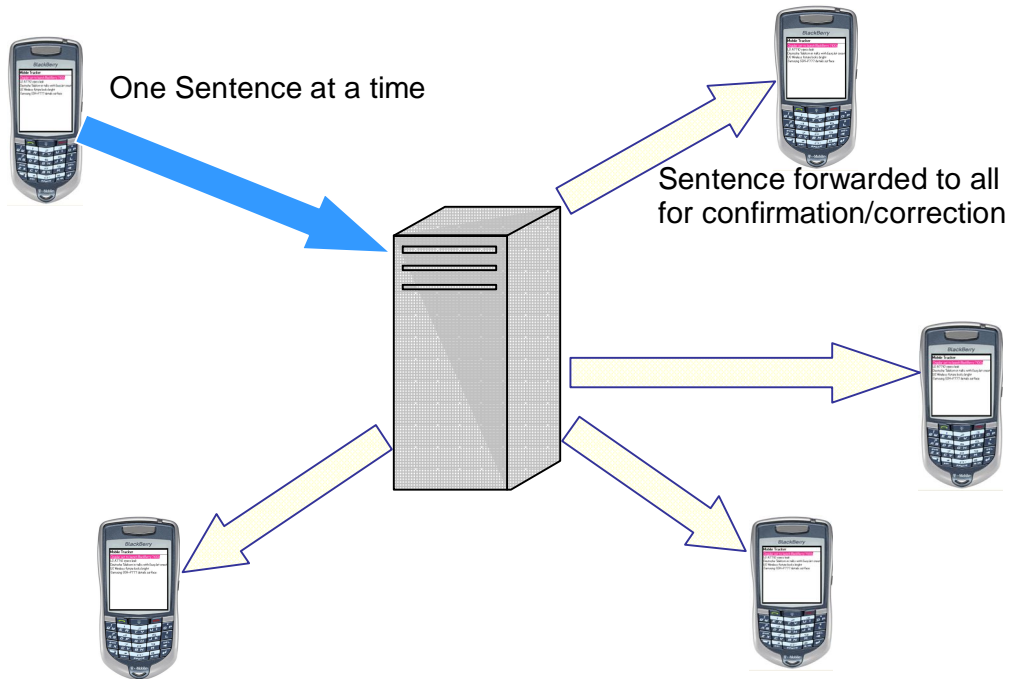
This system will use "short message service" to improve the sentence building skill. So, any one who has a mobile phone can take part in this system.

### Work procedure:



At first we planned that the server will correct the sentence and will send the sentence to the other group members' mobile. Then the group member will check the sentence whether it makes any sense or not. But when we try to use such software in the server, we faced some difficulties. Firstly, we thought to apply software like *Charniak*, *Stanford parser* in the server which is available in the internet, but the instruction to use or operate the software is not clearly instructed. Secondly, the kind of pc we have, to use such software is very difficult and needs a lengthy research. Thirdly, if the server at the very beginning does correct the sentence by itself and sends it to the group members, the members will not get the scope to find out and correct their problems (spelling mistakes, grammatical errors). Thereby we have decided that the sentence will be sent to the group members from the server (in figure) but the server will not correct the errors. We will use Peer Pressure to correct the sentence.

Figure 2.2: Implementation of proposed solution



Then we have started to use the Stanford parser by changing its code so that it becomes compatible for us. Limitation of Stanford parser is – sometimes it gives output as parse tree for both the grammatically correct and incorrect sentence. Example: I am a student, I are a student. We have tried our best to train it by Brown corpus to solve this problem. But we learned that it is not possible.

Now we have decided to use a Statistic parser, Open-NLP-Parser it is trained by Brown Corpus and uses pantry bank tag set for tagging. But we will use the grammar checker and spell checker only for those sentences which were agreed as correct by the team members. As a result peer pressure will help the participant to improve their English sentence building skill and they don't need a teacher to correct their agreed sentence because of the server support.

## CHAPTER III IMPLEMENTATION

Implementation is divided into two parts

1. Prototype
2. Software

### 3.1 Prototype

We used Microsoft Excel to develop the prototype of our software. Me and my other two group members formed a group to test the prototype.

#### 3.1.1 Form Name: User Login

User: Participants

Purpose:

- User need to login into a group to be a part of the process to use the system.

Process:

- User will login first with a user name and email address. Here, User: Snigdha, Email: [chaity38@hotmail.com](mailto:chaity38@hotmail.com) written into the particular (Fig 1) spaces and submitted to server.

Environment: Windows

Figure3.1: User login form

The image shows a browser window with a login form. The address bar contains the following text: `Snigdha P.L Rima P.L Mahi P.L Rank`. Below the address bar, there is a "Log In" form with two input fields: "User Name" containing "Snigdha" and "Email" containing "chaity38@hotmail.com". A "Submit" button is located below these fields. To the right of the form, there is a vertical stack of buttons: "Send", "Agree", "Disagree", "End of The Story", and "Dispute Management".

### 3.1.2 Form Name: Server

Purpose: To save user information in future use. To make conform about login with require information.

To save the sentence temporarily into the Sever.

Send the sentence to all of the group members.

To save users score.

Process: Require information will be automatically save in this form named sever.

Written sentence will be automatically saved in the server with corresponding paragraph and line number.

Now the sentence will be send to the other members of the group by using "Send to All" button.

By writing a correct sentence users can add score to be awarded.

Environment: Windows

Figure3.2: View of server after user login

Name	Sentence Send by	P.L	Score	Email	Vote
Snigdha				<a href="mailto:chaity38@hotmail.com">chaity38@hotmail.com</a>	
Rima				khoku_rima@yahoo.com	
Mahi				mahive@yahoo.com	

*Send to All*

*Set Rank*

*Clear*

▼

Figure 3.3: Sentence manipulate in server

Name	Sentence Send by	P.L	Score	Email	Vote
<b>Snigdha</b>	Everyone has a memorable day in his life.	1.1		<a href="mailto:chaity38@hotmail.com">chaity38@hotmail.com</a>	
<b>Rima</b>				khoku_rima@yahoo.com	
<b>Mahi</b>				mahive@yahoo.com	

*Send to All*

*Set Rank*

*Clear*

Figure 3.4: Gain score in server

Name	Sentence Send by	P.L	Score	Email	Vote
<b>Snigdha</b>			5	<a href="mailto:chaity38@hotmail.com">chaity38@hotmail.com</a>	Ok
<b>Rima</b>			1	khoku_rima@yahoo.com	Ok
<b>Mahi</b>			4	mahive@yahoo.com	Ok

Every person has an important day. So, I also have a day which is very important to me. The day is my birthday. I came in this world on that day. That's why I can see the beauty of this world. I always thank my mother to bring me in this colourful world. In my birthday when every person who are involve in my life wish me, I feel very happy. I always enjoy my birthdays. It is a special day for me, that's why my parents always give me nice gifts and party. My

*Send to All*

*Set Rank*

*Clear*

### 3.1.3: Form name: Set rank

Purpose: To save and show which sentences have to manage dispute.

To show how many times a sentence was circulated among the group members to get the correct one.

Process: To upgrade the accepted sentence sender will agree the received sentence but he/she may click “Dispute Management” button to paraphrase it later on.

Environment: Windows

Figure 3.5: Dispute management and counter in set rank.

Sentences	P.L	Sender	Counter	Dispute Management
And that's why I can see the beauty of the world.	1.5	Snigdha		
That's why I can see the beauty of this world.	1.5	Snigdha	2 D	
Always I thank my mother cause she bring me in this clourfull world.	1.6	R ma		
I always thank my mother to bring me in this colourful world.	1.6	Snigdha	2 D	
In birthday wher every person who are invlove my life if they wish me then i feel very happy.	1.7	Mahi		
In my birthday when every peisor who are irvolve in my life wish me, I fee very happy	1.7	R ma	2 D	
I enjoyad my irthday always.	1.8	Snigdha		
I always enjoy my bithday.	1.8	R ma		
I always enjoy my birthdays.	1.8	Mahi	3 D	
It is so special day for me, that's way my Pa'rents always give me cute gifts and party	1.9	R ma		
It is a special day for me, that's why my parents always give me nice gifts and party.	1.9	Snigdha	2 D	
My birthdey always will be important cay of my lfe.	1.1	Mahi		
My birthdey always will remain important day of my life.	1.1	R ma		
My birthdey will always remain the mcst important cay of my lfe.	1.1	Mahi	3	

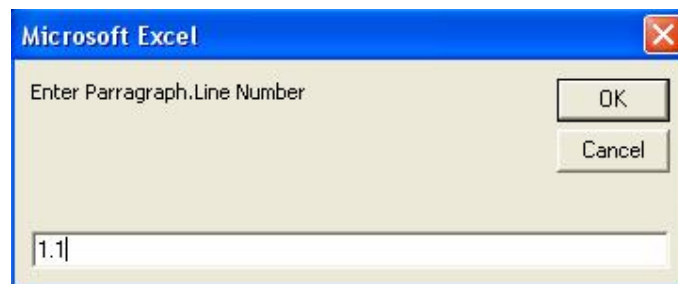
### 3.1.4 Form Name: Paragraph and Line Number

Purpose: To enter a sentence with corresponding line number to a paragraph.

Process: 1.1- first one means first paragraph and the 1 after the dot is for the first line.

Environment: Windows

Figure 3.6: Entering line number with paragraph number.



A screenshot of a Microsoft Excel dialog box. The title bar is blue and contains the text "Microsoft Excel" and a red close button. The main area is light beige and contains the text "Enter Parragraph.Line Number" (note the misspelling of "Paragraph"). Below this text is a text input field containing the text "1.1". To the right of the input field are two buttons: "OK" and "Cancel".

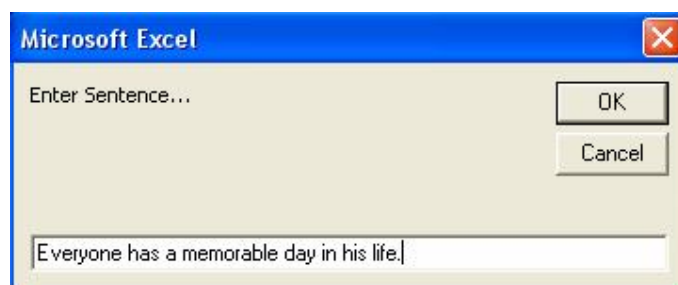
### 3.1.5 Form Name: Insert Sentence

Purpose: To ask the group member to insert a sentence to complete a story.

Process: Write a sentence into the given place.

Environment: Windows.

Figure 3.7: Inserting sentence



A screenshot of a Microsoft Excel dialog box. The title bar is blue and contains the text "Microsoft Excel" and a red close button. The main area is light beige and contains the text "Enter Sentence...". Below this text is a text input field containing the text "Everyone has a memorable day in his life.". To the right of the input field are two buttons: "OK" and "Cancel".

### 3.1.6 Rules:

1. Login in the user login form by giving user name and E-mail address.
2. Name and E-mail address will be saved in a form named server.
3. We have implemented and tested the prototype by using a group containing three members. There was no option to add more users.
4. Any one of that group will give the first sentence.
5. Before sending the sentence s/he has to send the paragraph no.line no.

#### Example 1.1.

6. In the server that sentence will saved temporarily with corresponding line number and paragraph number beside the writer name.
7. Form the server by using "Send to All" button that will be send to all of the members of that group.
8. Then individually each member will vote for the sentence by using "Agree" or "Disagree" button.
9. If there is no mistake and no confusion about the meaning of that received sentence but if any member wants to paraphrase the sentence then he will click "Agree" and "Dispute management"
10. If any one or more than one member select "Disagree" for a sentence then randomly any will get the chance to rewrite the sentence.
11. When all of the members send "Agree" for a particular sentence then that sentence will be saved permanently in the server and writer will get 1 mark.
12. By maintaining same procedure written above a story will be completed.
13. "Set rank" form will save all the correct and incorrect sentences with corresponding paragraph.line no with writer's name and score.



### 3.1.7 Problems

While we tested the prototype by using mentioned rules we have faced some problems.

1. The first problem occurred in the prototype is, repetitions of the same sentence. If someone sends a sentence and at the same time somebody thinks that the sentence is not correct then the person who is in doubt gets chance to send another sentence which he thinks correct. Again, the sentence can be corrected by another person if someone thinks the sentence is incorrect. And in this process the chance having repetitions of a same (correct/ incorrect) sentence might occur.

2. Another problem is that the sentence might be in an infinite loop. Because if someone sends a sentence and some other person corrects that, then the person who has send the sentence for the first time, might think that his one was correct rather what some others are thinking and will again disagree with the new sentence. And same sentences which can be rephrase and written in different ways, the sentence might be caught into an infinite loop.

### 3.1.8 Solutions

To avoid such problem of rephrasing the same sentences, we have decided to add a button for dispute management in our prototype.

To solve the problem of the infinite loop we have decided to put a counter for the sentence. For example, a sentence can be circulated only for 5 times between the participants.

### 3.1.9 Test result of prototype

#### 3.1.9.1.1 First Story before using Prototype

I am a student of BRAC University. Now I am studying BBA in MGB department. I have got an important day in my life. This day is also a memorable day in my life. The day was my SSC result day, this is the result which I am waiting for ten years. After studying ten years I got a very good result. So, this result was very important in my life and I also enjoyed this day very much. Because my result was good. So all of my presents, friends appreciated me very much. I am not forgetting this day. In this day I bought a large amount of sweets and I gave everyone, for my good news. Usually I think this day is very most important day in my life.

#### 3.1.9.1.2 First Story after Using Prototype:

I am a student of BRAC University. I am studying BBA in MGB department. I have got an important day in my life. This day is also a memorable day in my life. The day was my S.S.C result day. This is the result for which I am waiting for ten years. After studying ten years I got a very good result. So, this result was very important in my life. And I also enjoyed this day very much, because my result was good. So, my parents and all of my friends appreciated me very much. I will not forget this day. On that day I bought a large amount of sweets and gave those to everyone for my good news. I think that day was the most important day in my life.

Figure 3.8 Status of Set rank while using Prototype

Sentences	P.L	Sender	Counter	Dispute Management
I am a student of BRAC University.				
Now I am studing BBA in MGB department.	1.1	Rima	1	
Now I am studying BBA on MGB department.	1.2	Mahi		
I am studying BBA in MGB department.	1.2	Snigdha		
I have got an important day in my life.	1.2	Rima	3	D
This is also memorable day in my life.	1.3	Rima	1	D
	1.4	Snigdha		
This day is also a memmorable day in my life.				
The day was my S.S.C result day.	1.4	Mahi	3	D
This is the result which I am waiting for ten years.	1.5	Mahi	1	D
This is the result for which I am waiting for ten years.	1.6	Snigdha		
After studing ten year I got a very good result.	1.6	Mahi	2	
After studying ten years I got a very good result.	1.7	Rima		
So, this result was very important in my life.	1.7	Snigdha	2	D
So, I also enjoied this day very much.	1.8	Mahi	1	D
And I also enjoyed this day very much.	1.8	Snigdha		
Because my result was good.	1.8	Snigdha	2	D
So all of my presents, friends appreside me very much.	1.9	Mahi	1	D
So, my parents and all of my friends appreciated me very much.	1.1	Rima		
I am not forget this day.	1.1	Snigdha	2	
I will not forget this day.	1.11	Mahi		
In this day I bought a large amount of of sweet and I gave everyone for my good news.	1.11	Snigdha	2	D
On that day I bought a large amount of sweets and gave those to everyone for my good news.	1.12	Rima		
Usually I think this day is very most important day in my life.	1.12	Rima	2	D

I think that day was the most important day in my life.	1.13	Snigdha		
	1.13	Snigdha	2	D

### 3.1.9.2.1 Second Story before using Prototype

Every person have a personal life. They should enjoy that one. I have the most important day in my life. It's my mom birthday. It is 26<sup>th</sup> april. I really enjoyed that day because this day is my life part.

### 3.1.9.2.2 Second Story after using Prototype

Every person has a personal life. They should enjoy that one. I have a most important day in my life. It's my mother's birthday. It is on 26th April.

Figure 3.9 Status of Set rank while using Prototype

Sentences	P.L	Sender	Counter	Dispute Management
Every person have a personal life.				
Every person has a personal life.	1.1	Snigdha		
They should enjoy that one.	1.1	Rima	2	D
I have the most important day in my life.	1.2	Rima	1	D
I have a most important day in my life.	1.3	Mahi		
It's my mom birthday.	1.3	Mahi	2	D
it's my mom's birthday.	1.4	Snigdha		
It's my mother's birthday.	1.4	Snigdha		
It is 26 <sup>th</sup> april.	1.4	Mahi	3	D
It is on 26th April.	1.5	Rima		
I really enjoy that day because this day is my life part.	1.5	Snigdha	2	
I really enjoy that day because that day is a part of my life.	1.6	Mahi		
	1.6	Snigdha		

## 3.2 Software

After implementation of the prototype we have tested it and have faced some problems. We have tried our best to resolve those problems and developed the final software.

### 3.2.1 Technology used:

- ✓ Mobile
- ✓ SMS lib
- ✓ Stanford Parser (not in use now)
- ✓ Jazzy-Spellchecker
- ✓ Open-NLP-Parser (for grammar check)

- ✓ Server Computer (manage the whole system)
- ✓ Internet facility
- ✓ E-mail account
- ✓ JAVA 1.5
- ✓ SQL (Database)

### 3.2.2: Database: Table name with attribute name

Table 8: View of **studentDetails**


Key	ID	Name	Data Type	Size(...)	Nulls	Default
		name	char	32	<input type="checkbox"/>	
		phone	char	32	<input type="checkbox"/>	
		mail	varchar	50	<input checked="" type="checkbox"/>	
		rank	int	4	<input checked="" type="checkbox"/>	(0)
		vote	char	32	<input checked="" type="checkbox"/>	

Table 9: View of **sentenceDetails**

Key	ID	Name	Data Type	Size(...)	Nulls	Default
		phone	char	32	<input checked="" type="checkbox"/>	
		sentence	varchar	160	<input checked="" type="checkbox"/>	
		pl	char	10	<input checked="" type="checkbox"/>	(0.0)
		counter	int	4	<input type="checkbox"/>	(0)
		disputeManagement	char	10	<input checked="" type="checkbox"/>	

Table 10: View of **sms\_in**

Key	ID	Name	Data Type	Size(...)	Nulls	Default
		type	char	1	<input type="checkbox"/>	
		originator	char	32	<input type="checkbox"/>	
		message_date	datetime	8	<input type="checkbox"/>	
		text	varchar	160	<input type="checkbox"/>	
		ref_no	numeric	9(18,0)	<input checked="" type="checkbox"/>	
		original_send_date	datetime	8	<input checked="" type="checkbox"/>	
		date_received	datetime	8	<input checked="" type="checkbox"/>	

Table 11: View of **sms\_out**

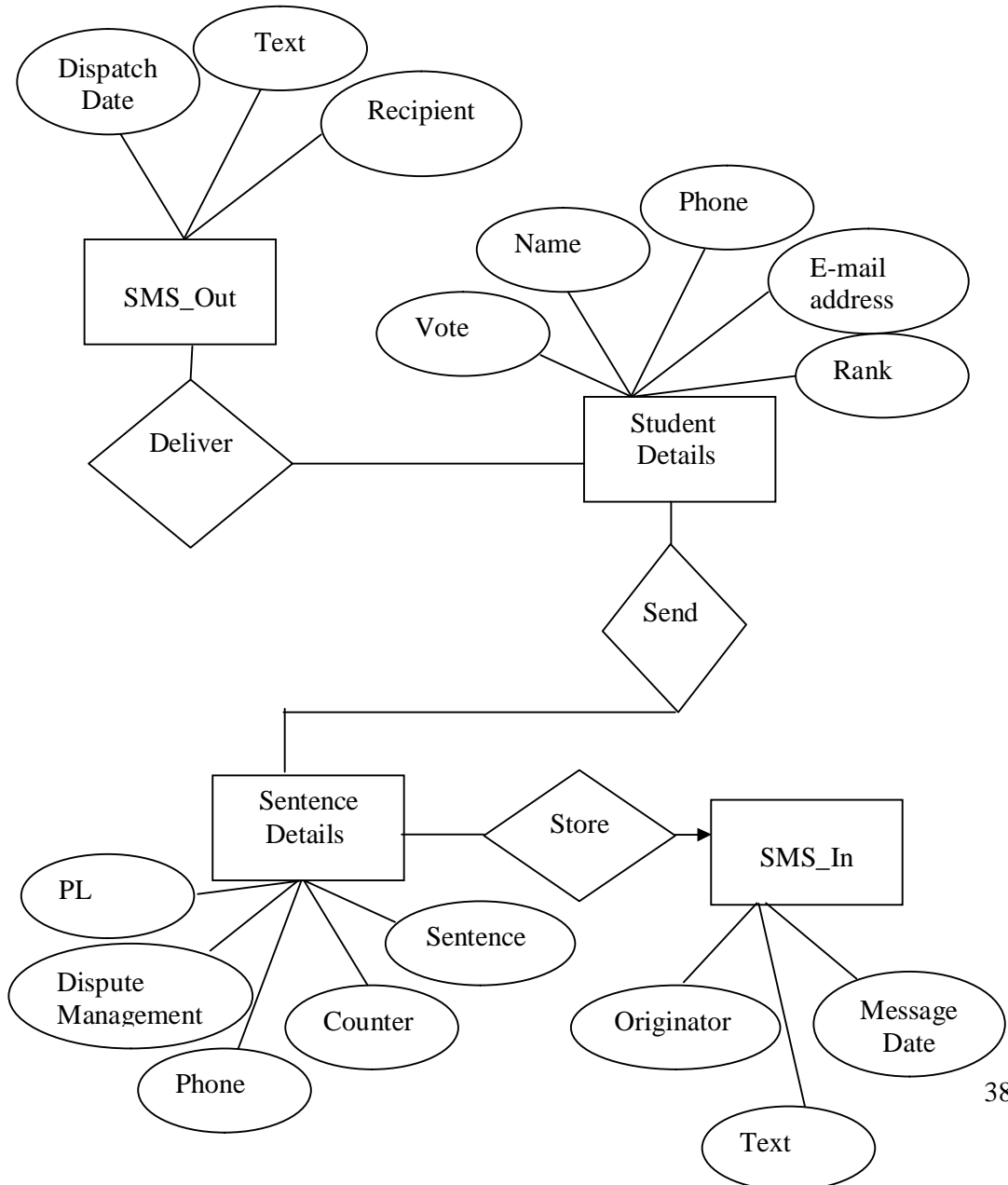
Key	ID	Name	Data Type	Size(...)	Nulls	Default
-----	----	------	-----------	-----------	-------	---------

Key	ID	Name	Data Type	Size(...)	Nulls	Default
		id	int	4	<input type="checkbox"/>	(0)
		recipient	char	32	<input type="checkbox"/>	
		text	varchar	160	<input type="checkbox"/>	
		dispatch_date	datetime	8	<input checked="" type="checkbox"/>	
		status_report	int	4	<input type="checkbox"/>	(0)
		flash_sms	int	4	<input type="checkbox"/>	(U)
		src_port	int	4	<input type="checkbox"/>	(0)

### 3.2.3: Entity Relationship

We have used SQL as database of our software and we have created four distinct tables or entities. There are some relations among those entities. Below the E-R diagram is showing the existing relation.

Figure: Entity Relationship diagram



### 3.2.4: Front –End at Server side

We have used SMS lib to send and receive the message those messages are saved in Database (SQL-tables). At first the participants will log in by their mobile phone. So the starting of the system is-

#### 3.2.4.1: Successful Log in to the process

User: Participants

Purpose:

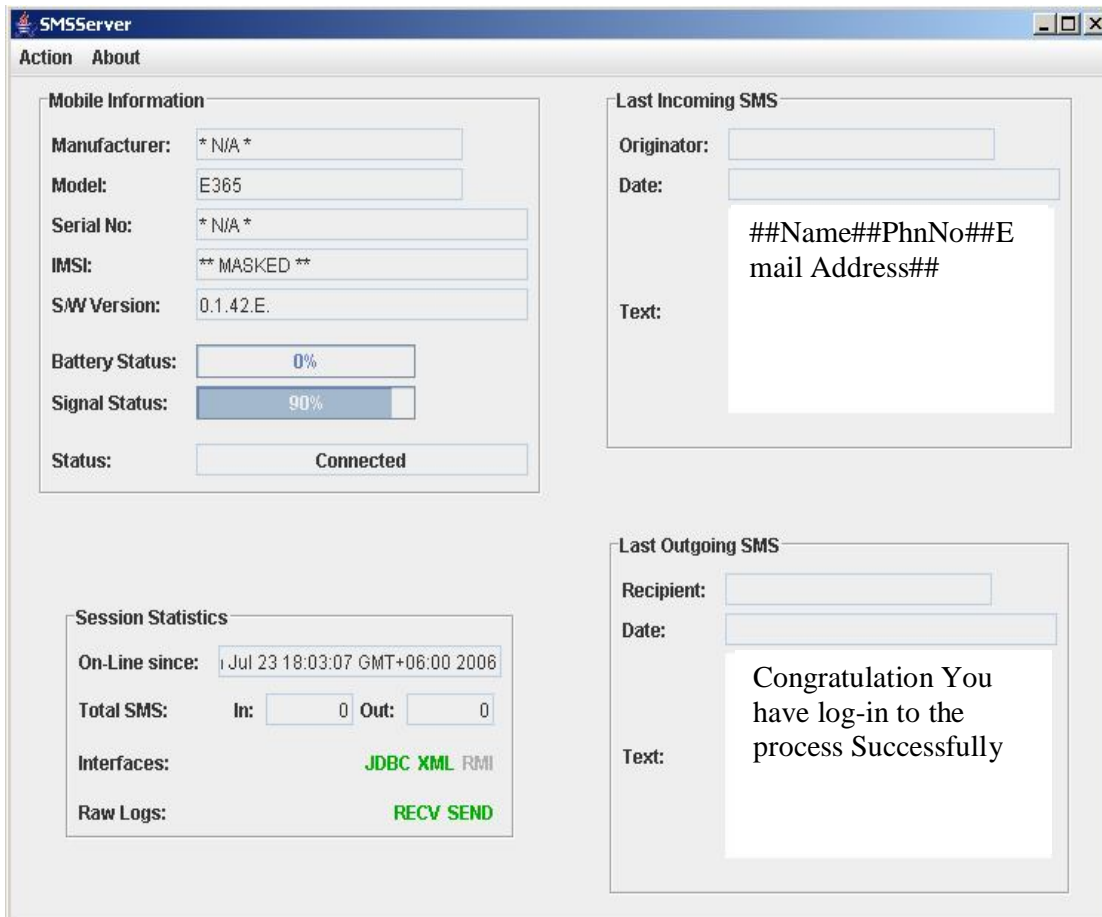
- User need to login into a group to be a part of the process to use the system.

Process:

- User will login first with a user name and email address and Phone number. Format given into the particular (Fig 3.10) space and submits to the server.

Environment: Windows

Figure 3.10 View of SMS Lib after successful log-in.



### 3.2.4.2: Prompt and Send the First Sentence

User: Participants

Purpose:

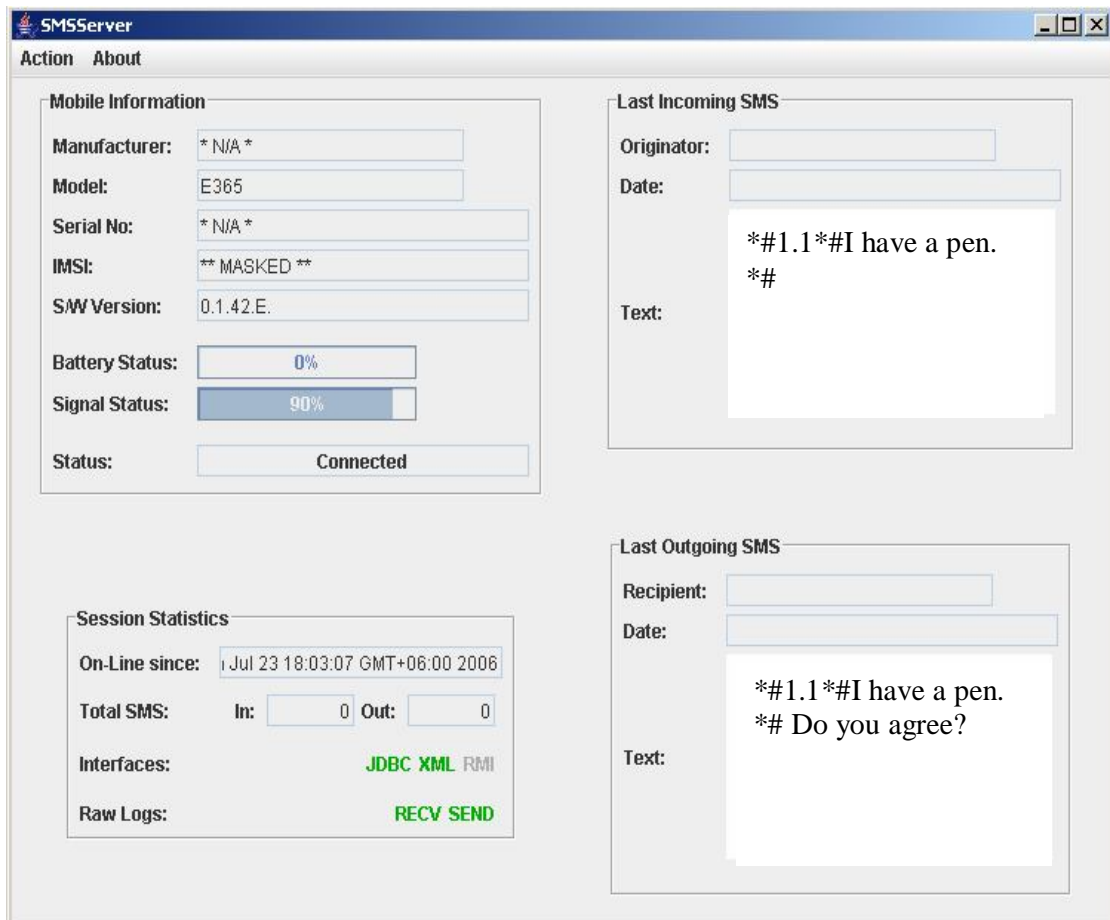
- The Participant who has login first to the system will get the chance to send the first sentence of the story.

Process:

- User will write the paragraph number and line number first then will write the sentence. Format given into the particular (Fig 3.11) space and submits to server.
- Server will forward the sentence to all of the members of the group for conformation or correction.

Environment: Windows

Figure 3.11 View of SMS Lib while receiving and forwarding sentence.





### 3.2.4.3: Server Support after conformation of all the participants

User: Participants

Purpose:

- If the entire Participant of the group conform that the sentence is correct then the server will check the sentence for spelling mistake or grammatical mistake.

Process:

- When all the members send agree for a particular sentence then the server will check if there is any spelling mistake.
- If there is no spelling mistake then the server will go for the grammatical mistake
- If there is no Grammatical error then the server will send a congratulation message to all of the participant and they will go for the next sentence.
- If there is any spelling or grammatical mistake then the server will send an Error message to all of the members to let them know the sent sentence contain error.
- Then the last member who has sent the sentence will get the chance to write the correct sentence.

Environment: Windows

Figure 3.12 View of SMS Lib after completing a sentence successfully.

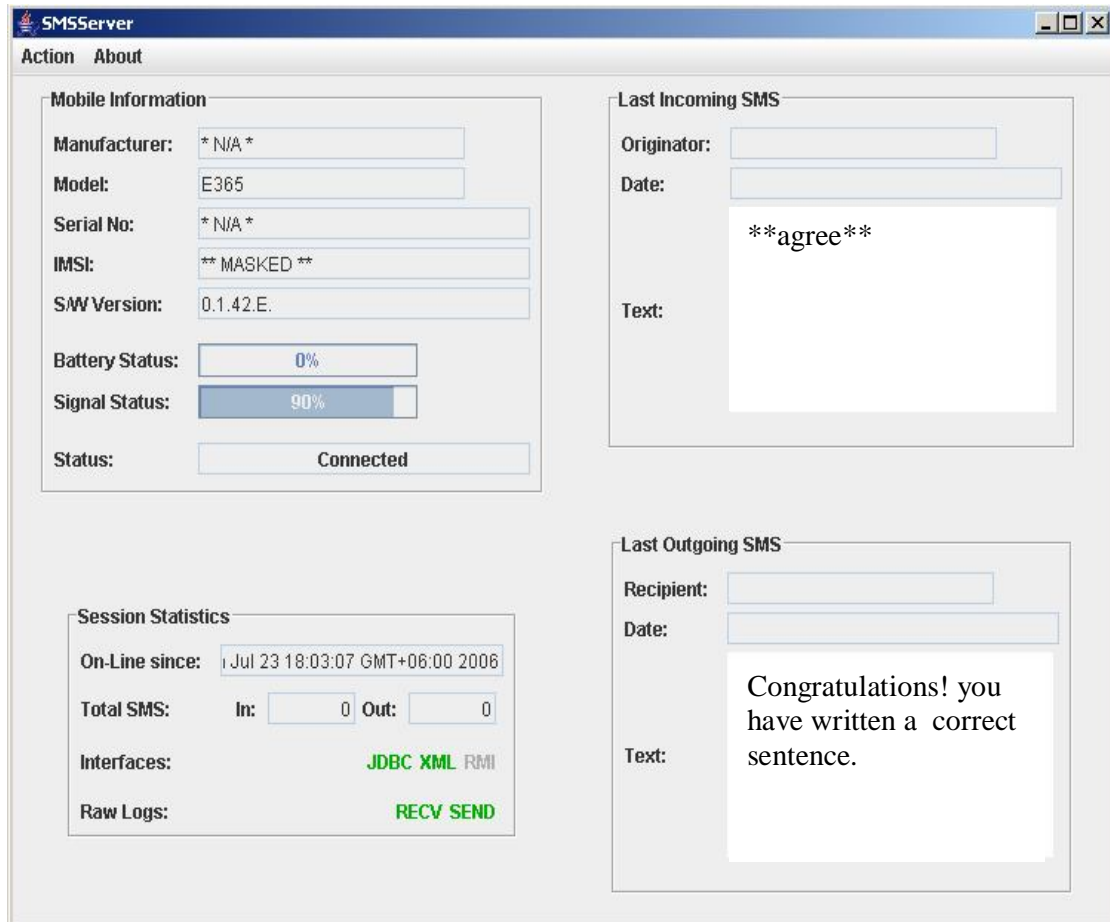


Figure 3.13 View of SMS Lib after conforming as correct, an incorrect sentence.

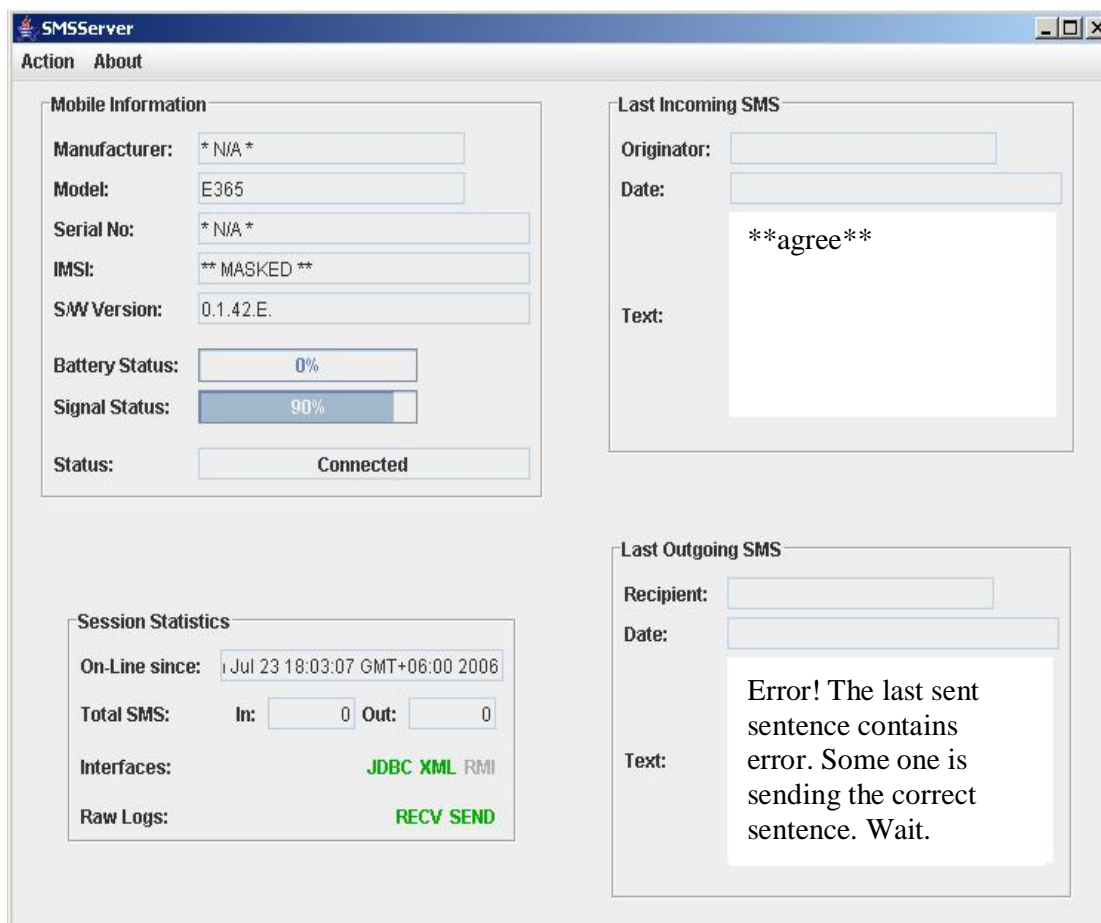
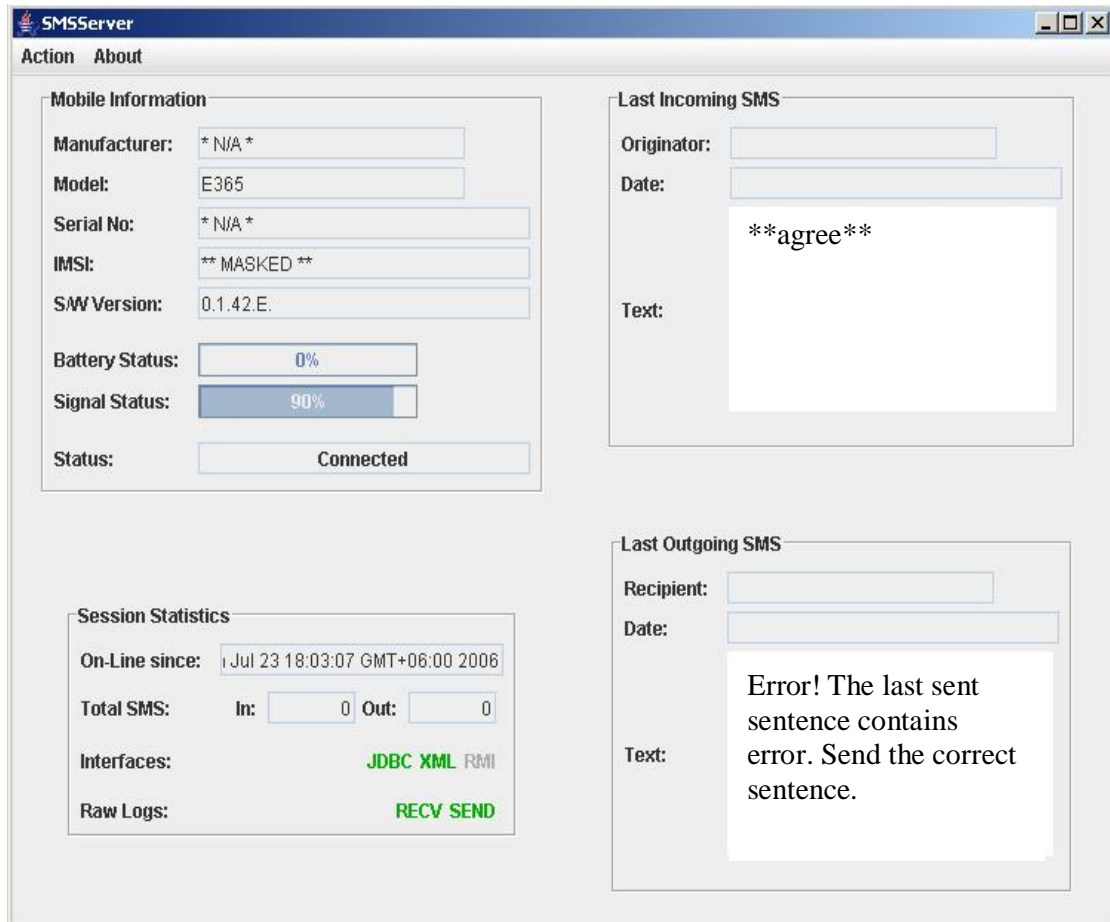


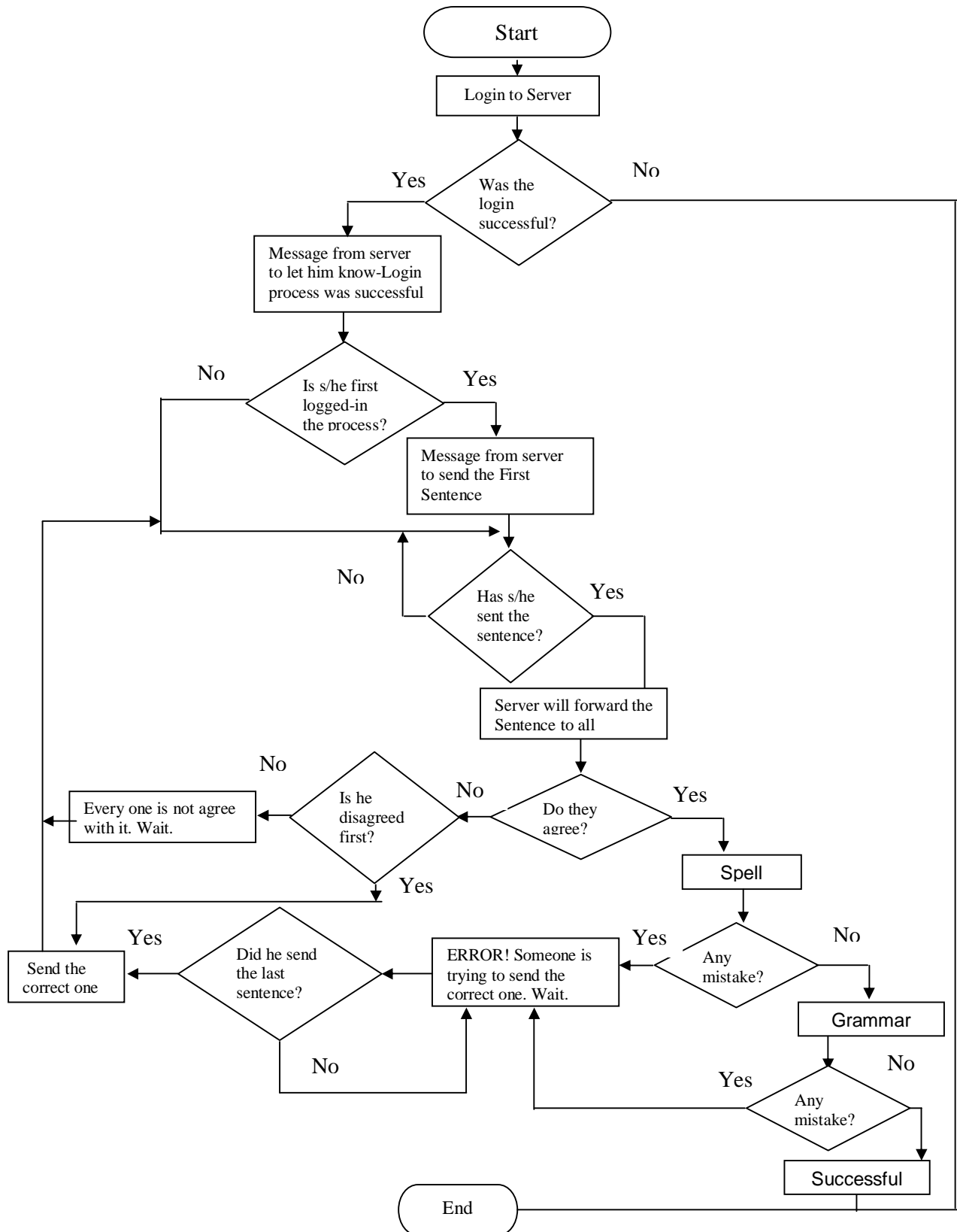
Figure 3.14 View of SMS Lib While giving chance to a particular participant to write the correct sentence.



### 3.2.5: Complete cycle with in a Flowchart

The flow chart given below is showing a complete cycle of a sentence building. It will continue until the end of the story. If any participant send EOS—End of the Story and rest of the members agree with that then the writing of the story will stop means the story is complete.

Figure 3.15: Flow chart of work procedure



## Chapter IV

### Limitations and Future work

#### 4.1 Limitations:

##### Actual write-up:

when published my S.S.C result that day was the most important day for my life. I didn't forget that day. That day I was very afraid because, I think that result was very important for me. That was the first time when I got the very good result. My GPA was 4.63. I felt very happy when I know my good result. Every one congratulated me. I felt that day was very nice day for me. I never forget that day.

##### Corrected write-up:

When my S.S.C result was published, that was the most important day of my life. I will not forget that day. That day I was very afraid because, I think that result was very important to me. That was the first time I had good result. My GPA was 4.63. I felt very happy when I saw my good result. Everyone congratulated me. I think that was a nice day for me. I will never forget that day.

We have given these two write up to a teaching assistant of English department. She has given actual write-up: 3 marks out of 10 and Corrected write-up: 6 marks out of 10.

We are successful to remove spelling and grammatical mistakes but we have not considered the repetition of the sentence. So the improvement is

- Marginal
- We have checked only
  - Spelling mistake,
  - Wrong verb form And
  - Sentence Structure
- There are so many Errors left to check

Our plan was to make the total process automated like the incoming and sending SMS from server, spell checking, grammar checking, then send the feedback to the participants based on the output of the checker. But we are not Hundred percent successful to implement our plan.

## 4.2 Future work:

With time, other checking modules may be added as part of server support. We need to Pilot the system to prove effectiveness. For this we need

- Field trials with BRAC University students
- Support of Grameen Phone to make the system feasible.
- Project funds for field trial and
- Donor to implement the total system.

In future total connection process will be automated. While giving feedback about an agreed sentence or a sentence which has circulated 5 times and still contain errors, in future the system will be able to mention the specific name and number of occurrence of the Error in a story/sentence like-

Type of Error	Total no of Occurrence	Example
Wrong word form result	1	when published my S.S.C
Preposition	1	..... <u>for</u> my life
Plural	1	I think <u>thats</u> result
Spelling Mistake	3	congroused
Verb missing	1	I never forget
Wrong word choice	1	<u>Thats</u> result was very

This information will be sent to the participants through E-mail to let them know what type of mistake they have done.

## **Chapter V**

### **Conclusion**

#### **5.1 Concluding words**

Almost all over the world English is used widely. The popularity and use of English language is higher than other languages. In those country where English is not their native language but the necessity of English language is vast but they are not that much capable to communicate in English due to lack of skill the proposed system will develop their English proficiency. English proficiency can be improved by

1. Reading
2. Listening
3. Writing and
4. By exchanging views & ideas in English with people.

Reading and listening language can improve proficiency partially where writing and exchanging views & ideas in English with people help to improve sentence-building skill within a short period. In the proposed system we used mobile SMS system, which already has reached to ordinary people also. So, every one can use this system to improve his/her sentence building skill. By using the system people can have fun also if they take it as a game. So people from every corner of the world can take part in this system to improve their level of English sentence building skill.



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