

**Final Year Project Report**

**Pakistan sign language (Corpus)**



**Project Advisor**

**Prof. Nabeel Sabir Baloch**

**Submitted By:**

**Hafiz Shoaib Awan                      12002105002**

**Qasim Aziz                                      12002105005**

**Hassan Javed Nagra                      12002105017**

**M Abbas                                        12002105009**

**Session**

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**C-II Johar Town Lahore Pakistan**

## **Dedication**

We have successfully completed our work with the help of All Mighty Allah, under the supervision of Sir Nabeel Sabir Baloch. We dedicate this project of ours to Sir Nabeel Sabir Baloch and the other staff of UMT who were very kind, helping and dedicated there time in this project. We also dedicate it to our friends and family. We got great help and support from the deaf students of UMT as well as the deaf students of various other institutes we visited personally who made us learn sign language, so we also dedicate this project to them as well.

## Final Approval

### Panel of Examiners

- **Head of Department** \_\_\_\_\_  
Department of Computer Science  
UMT Lahore
  
- **Program Director ( Final Year Projects)** \_\_\_\_\_  
Department of Computer Science  
UMT Lahore
  
- **Supervisor** \_\_\_\_\_  
Department of Computer Science  
UMT Lahore
  
- **Co-Supervisor** \_\_\_\_\_

## **Acknowledgment**

We would like to be thankful and grateful of our advisor Sir Nabeel Sabir Baloch for all his time and support given to us. He has been very tolerant to us. We are also thankful to the complete staff of University of Management and Technology for giving us the directions in those four years. I will also particularly thank my Family for their adoration and consolation. Much obliged to you, at long last, to each one of my companions for their sponsorship and kinship throughout the years.

<b>Project Title</b>	<b>Pakistan Sign Language(Corpus)</b>
<b>Objective</b>	<b>Communication between normal and deaf people</b>
<b>Undertaken by</b>	<b>Hafiz Shoaib Awan Qasim Aziz Hassan Javed Nagra M Abbas</b>
<b>Supervised by</b>	<b>Prof. Nabeel Sabir Baloch</b>
<b>Starting Date</b>	<b>28 Nov 2015</b>
<b>Tools Used</b>	<b>HamNoSys Keyboard, Sigml Conversion tool, PHP, HTML</b>
<b>Operating System</b>	<b>Window, MacOS</b>
<b>Documentation</b>	<b>Microsoft Office</b>

## **Abstract**

According to World Health Organization .5 million people of Pakistan are Deaf , so they are unable to communicate with us. To overcome this communication gap we created a “CORPUS”

Which acts like a dictionary that contains words & symbols used for communication on daily basis of life.

Data in corpus is created with the help of different words video which are then converted into “HAMMNOSYS”, which is later converted into “XML” language by using tools.

“XML” code will be given to AVATAR which will perform different Symbols which will be easily understandable by DEAF community.

To represent all this DATA a website has been created with the name of PSL CORPUS.

## REVISION CHART

Version	Primary Author(s)	Description of Version	Date Completed
<i>Requirement Analysis</i>	Qasim Aziz	Gathered all the information so as to develop a helpful corpus.	20 May 2016
<i>Data Collection 1</i>	M Abbas	Gathered information regarding the most often used words through books of deaf and by visiting various deaf centers.	15 June 2016
<i>Data Collection 2</i>	Hassan Nagra	Captured videos of all words that were finalized in “Data Collection 1”.	10 Oct 2016
<i>Data Conversion 1</i>	Qasim Aziz	All the videos were then automated using Sign Imitator Avatar and HamNoSys of those signs were created.	24 Nov 2016
<i>Revision of Data Conversion 1</i>	Hafiz ShoaibAwan	Did revision of all HamNoSys and increased their accuracy.	20 Dec 2016
<i>Website Development</i>	Hafiz ShoaibAwan	Development of wesite step by step and interface by interface.	1 Feb 2017
<i>Creation of Database</i>	Hafiz ShoaibAwan	Created a database and stored the data in it.	15 Feb 2017
<i>Creation of Admin Panel</i>	Hafiz ShoaibAwan	Created an admin panel for administration.	1 March 2017
<i>Revision 1</i>	Qasim Aziz	Overviewed the user interface and functioning of admin panel	15 March 2017
<i>Revision 2</i>	Hafiz ShaoibAwan	Enhanced the User Interface and fixed bugs	8 April 2017
<i>Revision 3</i>	Hassan Nagra	Verification of complete data set by deaf persons and various other techniques	20 May 2017
<i>Final</i>	Hafiz ShoaibAwan	Finalized the interface and further functionalities of the website.	15 June 2017

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## Definitions and Acronyms

<b>Acronym</b>	<b>Definition</b>
HamNoSys	Hamburg Notation System
PSL	Pakistan Sign Language

**Table 1: table of acronym and definition**

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# 1. INTRODUCTION

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Peoples in this world interact and communicate with each other. Language plays a role to make communication possible. The peoples having the ability to talk can reduce their communication gap by learning different languages. On the other hand there is large number of population in every country who has a deficiency of hearing and speaking. Due to this deficiency they become unable to communicate with a normal person or to express their ideas to them. As many countries have made their own corpus for their sign language but there is no corpus for PSL (Pakistan Sign Language). It is basically a dictionary for the words used by deaf in daily routine. Corpus made these words used as machine readable. Corpus consists of words and videos of the signs.

The people of Pakistan have strong cultural preference for consanguineous marriage and prevalence of recessively inherited disorders. This consanguineous marriage causes many disabilities in the new generation of which deafness (Lack of hearing) is one of them. Deafness is the disability to hear normally whether permanent or fluctuating. It is clinically and genetically heterogeneous and can be caused through environment as well as genetic factors. It is estimated that the hearing disability is 1.6 per 1000 in Pakistan and 70% of hearing loss arises from consanguineous-families. It is estimated that about 10% of genetic disorders are caused due to consanguineous marriages, in most of the middle-east the percentage is 30%, while in Pakistan it is about 40%. According to WHO 278 million peoples worldwide have disability to hear. This could increase up to 700 million by 2015 and up to 900 by 2025.