

Project Abbr &Name	WGAME , Word Game	Client/Supervisor +email	Dr Maria Keet <a href="mailto:maria.keet@uct.ac.za">maria.keet@uct.ac.za</a>
Date	13 August 2021	Tutor +email	Yash Ramsamy <a href="mailto:RMSYAS003@myuct.ac.za">RMSYAS003@myuct.ac.za</a>
Team Members	Lunga Tsewu	Sipho Nkele	Kuhle Mxotwa

## PURPOSE OF PROJECT

The aim of this project is to create an Android mobile learning Application, the application will provide a gaming experience just to make learning the language a fun experience for the users. The application target of the application will be people of all age groups who are interested in learning the language. The application will be mainly for people who are interested in speaking Xhosa and who have a strong background in English since all the features and functions will be developed with English as a language of learning.

In terms of what people should expect to learn upon interacting with the application, it will be basic communication terms, from how to greet properly to forming basic but proper sentences in Xhosa and learn how to write and pronounce terms and name of things in Xhosa.

The main goal is to make the learning as fun as possible so there will be filling in words puzzles and matching words after each lesson, and the lesson will be also delivered through audio, labelled pictures and text to help with pronunciation, recognition and writing respectively. The points to all the terms and exercise you get right will determine whether one moves on to the next level or tries again.

## SMART GOALS

Before we get into the features of the Application, we will talk about the function first and what each function does to the application, first.

Register function, this function allows users to be able to give their user name they wish to be registered under and other necessary information for them to be able to keep the score and the level of the game even they remove and re install the application again.

Sign in function, allows users to be able to sign in on the application if they want access and their data to be stored safe.

Learning function, this function allows the user to gain knowledge and understanding about the basic concept and each level is accessed by getting 75%+ on the exercises. So as mentioned before, the learning part of the application will include pronunciation which will include the user testing to an audio for them to be able to pronounce the words, then reading labels where each picture will be provided with a label and you have to try and learn what those label mean in Xhosa, then the last part grammar, where you have to understand what some statements in English mean in Xhosa.

Exercise function, this is the part of the application that will test your understanding about what you have learned from the lesson prior. The multiple choice where you have choose a term that associates to the picture is one of the ways in which this game will be testing users understanding of what they have learned, also matching English terms to Xhosa term of the same meaning is another way, then other step is to allow the users to build sentence in Xhosa, and be able to translate English into Xhosa, while also learning the spelling of the words.

The learning report will have exercise results for every level, where if the user does manage to get 75%+ can move to the next level.

## GOALS

So the goal of this application is to teach people Xhosa basic terms and concepts, pronunciation, basic building sentence techniques and grammar, then get a fun exercise at the end of each level and have get at least 75% minimum to move to the next level.

The user will be awarded a learning report when they have done all the exercise and where able to achieve a first class pass (75%>) at every level.

## INPUTS, OUTPUTS AND PERFORMANCE

The inputs for this application include texts where you have to fill in the name of the object from the picture and complete a sentence and button clicks, where you have match words and pictures

Then the outputs will be the Audio where the users have to listen to how the words are pronounced, Text where the users get responses to things like changing a word from English to Xhosa.

The finally pictures where each word the user chose will be mapped to their correct picture.

In terms of performance, just to make the game fun, to some exercises there will be high level time constraints where the users is in a race against time to find the best solution to the problem.

## RESOURCES AND CONSTRAINS

The resources that will be needed for this project include, basic English books to ensure that the application does provide the best grammar and spelling of the words used. Basic Xhosa book to ensure that all the terms are used correctly and with the correct spelling.

Then pictures will be needed as part of the visual presentation of the project.

Software application that the project will be developed from is Android studio, and some the diagrams will be drawn using an application like draw.io and to test whether the application is functioning as it should we will need people who are willing to test it, the devices that we will be testing it from will also be needed and faster laptop needed for the development stage.

Constrains will include things like RAM from the laptop, so a laptop with 8GB of RAM is needed and also a meeting place where we can hold discussion on how far we are with the project and what is next. To get people who are willing to test the application is also a constrain, on top of that time is another constrain, there might be so much to do with very little time.

Audio pronunciation form part of the constrains on the project as so of the audio are programmed in a way that enable them not to understand Xhosa terms which means they audio's can not pronounce them. Another constrain is that the application is developed for android smart phones so users who do not own an android device unfortunately can not use this application, then final constrain is that this application can only be used by people who have a strong background in English and just want to learn Xhosa.

## FEASIBILITY

the scope does seem realistic as it has taken into account so many scenarios on how the project could fail, and with those scenarios many possible solutions where put in place. included goals are are realistic and the resources needed are not impossible to find.