# SMART XYLOPHONE TUTORIAL APP

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## INTRODUCTION

Nowadays, the desire of every person to play a different instrument is rapidly increasing, including the xylophone. Playing musical instruments can have benefits like soothing the mind and distressing. Xylophone is usually used in the festive dance, marching bands, cheer dance, and music orchestra. Different types of instruments can make different sounds including xylophone, guitar, drums, etc. The xylophone is an ancient instrument that originated in Asia and Africa. It is a member of the percussion family of instruments. The first time a xylophone was used in an orchestra for the opera entitled "Hansel and Gretel", Engelbert Humperdinck, a German composer in 1893. The xylophone has also been used for purposes other than music. In Senegal, it is used to scare monkeys, birds, and other pests from peoples' gardens.

Technology can be defined as the machine that invented something new or innovative. Thus, the elevated curiosity of people includes the instrumental section of the sound sector which programmers wish to dive in. There is no denying that the importance of mobile phones in peoples' everyday lives and activities is unending. That's because there's a tremendous transformation going on with that mobile phones are no longer the typical communication device they used to be.

To individual and businesses alike, it has become the massive focus of attention, because of the numerous innovative features and opportunities that mobile phones offer. The continuous progress of mobile technology, the availability and access to high-speed internet, and the impressive communicative interface in these devices result in a whole new level and innovative mobile computing experience. This is made possible by mobile applications (mobile apps) development. The researchers took advantage of it because of the continuous growth

and advancement of mobile phones to develop an application where users will learn to play the xylophone.

**STATEMENT OF THE PROBLEM**

This study aimed to develop a software entitled "Smart Xylophone Tutorial App". Specifically, it sought answers to the following questions:

1. What are the features to be considered in the development of the "Smart Xylophone Tutorial App" in terms of:
   a. Screen Layout; and
   b. System Capability?
2. How do the respondents assess the "Smart Xylophone Tutorial App" in terms of:
   a. Functionality of the application;
   b. Reliability of the application;
   c. Usability of the application;
   d. Efficiency of the application;
   e. Maintainability of the application; and
   f. Portability off the application?

**METHODOLOGY**

This chapter discusses the research design, population and sampling, respondents of the study, research instrument, data gathering procedures, and statistical treatment of data used by the researchers. This study provided information on the researchers method that had been chosen to determine the factor to consider in creating the Smart Xylophone Tutorial App with the used of correspondent's answer through the survey questionnaire. The results were tallied and treated as results basis of the musicians playing Xylophone and how the experiment was processed in a way that the user would be satisfied.

**SUMMARY OF FINDINGS**

After analysing the data, the researchers came up with the following:

1. The researchers used different tools such as survey questionnaires to gather necessary data and information for better development of the application. The survey questionnaires were distributed to a total of fifty (50) respondents.
   A. The study revealed that the respondents agreed mostly on the features to be considered in developing the "Smart Xylophone Tutorial App." in terms of Screen Layout. The top 5 were "The application's User Interface is user friendly?" with a

verbal interpretation of "Required"; "The application displays clearly the note name?". with a verbal interpretation of "Required"; "The system's recording buttons are visible on screen?". With a verbal interpretation of "Required"; "The application's colors are good in the eyes?" with a verbal interpretation of "Required"; "Does the application display all the categories?" with a verbal interpretation of Required.

B. From the capability of the system, the study revealed that the respondents agreed most to the features presented in terms of "The application's User Interface is user friendly?".

2. The researchers used different tools such as survey questionnaires to gather necessary data and information for better development of the application. The survey questionnaires were distributed to a total of fifty (50) respondents.

A. For the main assessment to be considered according to the respondents in terms of Functionality, the top 3 were "The software has available all the functions required for its executions (sustainability)" with a verbal interpretation of "Agree"; "The sofwae does what was proposed correctly (Accuracy)" with a verbal interprtaion of "Agree"; "The Software is precise in executing the the functions (Accuracy)" with a verbal interpretation of "Agree"

B. For the main assessment to be considered according to the respondents in terms reliability,the top 3 were "The software is capable of recovering data in the event of failure (Recoverability)" with a verbal interpretation of "Highly Agree"; "The software informs users concerning invalid data entry (Fault Tolerance)" with a verbal interpretation of "Highly Agree"; "The software reacts

appropriately when failures occur (Fault Tolerance)". with a verbal interpretation of "Agree".

C. For the main assessment to be considered according to the respondents in terms of Usability, the top 3 were "It is easy to understand the concept and application (Understandability)" with a verbal interpretation of "Agree"; "It is easy to operate and control (Operability)" with a verbal interpretation of "Agree"; "The software facilitates the user's retrieval data (Learnability)" with a verbal interpretation of "Agree".

D. For main assessment to be considered according to the respondents in terms of Efficiency, the top 3 were "The resources used are appropriate (Resource Utilization)" with a verbal interpretation of "Agree"; "The software's execution time is appropriate (Time Behaviour)" with a verbal

interpretation of "Agree"; "The software's response time is appropriate (Time Behaviour)" with a verbal interpretation of "Agree".

E. For the main assessment to be considered according to the respondents in terms of Maintainability, the top 3 were "It is easy to modify and adapt (Modifiability)" with a verbal interpretation of "Agree"; "Changes are easy to test (Testability)" with a verbal interpretation of "Agree"; "It is easy to find a failure, when it occurs (Analyzability)" with a verbal interpretation of "Agree".

F. For the main assessment to be considered according to the respondents in terms of Portability, the top 3 were "It is an agreement with portability standards (Conformance)" with a verbal interpretation of "Agree"; "It is easy to use to replace

another program "Agree" "It is easy to adapt to other environments (Adaptability)" with a verbal interpretation of "Agree".

## CONCLUSIONS

The "Smart Xylophone Tutorial App." According to the fifty (50) respondents was efficient to use based on the result of the study. The respondents gave the recommended required features and considerations for the study of Smart Xylophone Tutorial App. Based on the the tramission of the sound using pitch, it is possible to process the pitch and identify the sounds of bars using Fast Frontier Transform (FFT).

## RECOMMENDATION

The researchers recommend this application to be further developed by future researchers to make it more innovative, competitive, and effective to the users. The application may be improved to make it compatible and functional to other musical instrument like guitar, piano, flute and etc. not only on xylophone.