

# Travel Intelligently through Android based Application – Tourist Guide

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## ABSTRACT

*Travel and Tourism industry has become very popular as per the latest industry statistics and when it is combined with the mobile industry, it becomes a great platform or channel to promote tourism. The proposed application which we have named as "Tourist Guide" aims to provide a better opportunity to promote its local beauty in a systematic manner. It acts as a virtual guide to the user and eliminates the role of a guide. It provides the visitor with a better traveling experience through the use of this application and supports three different languages that are English, Hindi, and Nepali. It includes voice clips and pictures that will help the user to understand the place in a better way. This application also includes Google Maps to navigate the place and has a search facility to search nearby places like shops, temples, and much more.*

**KEYWORDS:** Travel, Android, Tourism, Industry, Tourist guide, Mobile Application

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## I. INTRODUCTION

### A. Field of study

Travel and Tourism is an ever increasing industry that has registered a record growth in the recent period of recession. This success is due to the united contribution of both: the Travel & Tourism Industry and the Mobile Application Industry.

Smartphones have become an essential part of our life. When we look in terms of the travel industry, smartphones are the most efficient, effective and essential part of any travel firm's armor to boost their market. Gone are the days when people used to travel around the world with their travel guide to get information about a place and printed stuff for directions and locations. Now

with the advancement in mobile technology people prefer to explore the world on their own.

### B. Nature of problem

Sikkim is one of the most beautiful and richly cultured states of our nation. It has managed to preserve its heritage and simplicity till the very date. To promote its scenic beauty and heritage so many websites and android application has been developed but those applications are not enough. Those are good in providing little information about places that one can visit but are not better enough to guide the user to explore a place on their own. Another problem is that if one wants to get full information about the place then they have to hire a guide that may not be economically feasible for everyone.

Visiting a place with a guide also has some

limitations. There may be some visitor who is curious to know about a place in detail and doesn't like to miss even a single point but it may not be a good idea to ask the guide to repeat what he said. So either they have to refer the internet to get more information (if the internet has more information) or they simply have to satisfy themselves with whatever information they have got.

### C. Problem definition

Sikkim is one of the most important tourist destination in India and it has a lot of android based tourism applications that help the users to plan their visit. The problem with the existing system is that the users can only plan their visit based upon the information provided to them through the application, and they may find difficulty in searching the location and direction with the limited number of text and pictures.

Another problem is visitors always have to seek a tour guide if they want to know more about the history and myths of a place. A lot more things will be there in a place but the guide may or may not provide all the information and it may not be economically feasible for everyone to hire a tour guide.

### D. Proposed approach to solution

Considering this, we have come up with an android based tourism application for Buddha Park, Ravangla which we have named as "Tourist Guide". This application tends to be the first tourism based android application in Sikkim. It will act as a virtual guide to the user. Now the visitors do not have to move around with a tour guide or printed stuff as the work of these will be eliminated by this application. Using this application they can explore the places on their own. This application will act as their guide which they can operate as per their desire.

This application supports three different languages that are English, Hindi, and Nepali. It not just provides information in the form of text and pictures but also in the form of a voice clip. The voice clips make this application even more useful for the user. They can get a glimpse of the place while listening to the voice clips. It also contains Google maps to navigate places and a search facility where the user can search for nearby shops, temples, and much more.

### E. Significance of the problem and its solution

Today the mobile industry is ruling the market and with the advancement in technology, users

prefer to do everything on their own. They need everything on a click and therefore for the new generation of people and those who love traveling, this application will be a boon.

In today's world where everyone in India is talking about digitalization, this application is a very small example of it. It acts as a virtual tour guide to the user that eliminates the need for a guide and provides every tiny detail about the place in a simple way.

This application will be useful for the tourism department of Sikkim as well because it will act as a better mechanism for promoting Sikkim's tourism. Expectations of the users are also on hike. With the advent of technology and with the increasing percentage of Smartphone users, people prefer to use mobile phones as their pocket guide. Hence this application will give the user a better experience through mobile phones.

### F. Welfare/Benefit Issues

This application is useful for all the visitors in and around Sikkim who wish to visit the place without the need for a guide as the application itself will act as a virtual guide.

People may come from different places from India as well as abroad. They may not be very familiar with our native language, so this application will support three different languages that are English, Hindi, and Nepali. Wherever we go, we love our native language and would also prefer to communicate in our mother tongue. So this application will remove the language dependency to some extent.

Today even in India people are talking about digitalization. Our very own Honorable Prime Minister has started a mission to make our country a digital country. This application can be thought of as a step towards promoting the digitalization concept.

This application is also beneficial to the tourism department of Sikkim as it acts as a travel firm's armor to promote its local beauty through the help of the mobile industry which is ruling the world at the current state.

## II. TOURISM OVERVIEW

### A. World Tourism

Tourism is travel for pleasure, also the theory and practicing of touring, the business of attracting, accommodation and entertaining tourist and the business of opening tours

Tourism is an important and vital source of

income for many religions and countries. Its pilgrimage was recognized in the Manila Declaration on world tourism of 1980 as "an activity essential to the life of nationals because of its direct effects on the social, cultural, educational and economic sectors of national societies and their international relations.

Tourism brings in a large amount of income into a local economy in the form of payment for goods and services needed by tourist, accounting for 30% of the world's trade of services and 6% of overall exports of goods and services. It also creates opportunities for employment in the service sector of the economy associated with tourism.

Tourism has boasted uninterrupted growth over time, despite occasional shocks, demonstrating the sector's strength and resilience. International tourist arrival has increased from 25 million globally in 1950 to 278 million in 2000 and 1260 billion in 2015.

Likewise, international tourism receipts earned by destination worldwide have surged from us\$ 2 billion in 1950 to us\$104 billion in 1980, us\$ 495 billion in 2000 and us\$ 1260 billion in 2015.

Tourism is a major category of international trade in services. In addition to receipts earned in destinations, international tourism also generated us\$ 211 billion in exports through international passenger transport services rendering to non-residents in 2015, bringing the total value of tourism exports up to us\$ 1.5 trillion, or us\$ 4 billion a day on average.

International tourism now represents 7% of the world's exports in goods and services, up from 6% in 2014, as tourism has grown faster than world trade over the past four years.

The number of international tourist arrivals in 2015 increased by 4.6% to reach a total of 1182 million worldwide, an increase of 52 million over the previous year.

International tourist arrival worldwide is expected to increase by 3.3% a year between 2010 and 2030 to reach 1.8 million by 2030, according to UNWTO long-term forecast report Tourism Towards 2030.

Table- I: Arrival of international and domestic tourist all over the world

Year	International tourist Arrivals (millions)				Market Share (%)	Average a year (%)
	1990	2005	2014	2015	2015	2005-2015
World	435	809	1134	1186	100	3.9
Advance economics	299	470	622	653	55	3.3
Emerging economics	136	339	512	533	45	4.6
By UNWTO regions:						
Europe	261.5	453.2	580.2	607.7	51.2	3.0
Northern Europe	28.7	59.9	70.8	75.9	6.4	2.4
Western Europe	108.6	141.7	174.4	180.0	15.2	2.4
Central/Eastern Europe	33.9	95.3	120.2	126.6	10.7	2.9
Southern Europe	90.3	156.4	214.8	225.2	19.0	3.7
Of which EU-28	230.1	367.9	454.1	478.4	40.3	2.7
Asia and the Pacific	55.9	154.0	264.3	279.3	23.5	6.1
North-East Asia	26.4	85.9	136.3	142.1	12.0	5.2
South-East Asia	21.2	49.0	97.3	104.6	8.8	7.2
Oceania	5.2	10.9	13.3	14.2	1.2	2.7
South Asia	3.2	8.2	17.5	18.3	1.5	8.4
Americas	92.8	133.3	181.9	192.6	16.2	3.7
North America	71.8	89.9	120.9	127.6	10.8	3.6
Africa	14.8	34.8	55.3	53.5	4.5	4.4
North Africa	8.4	13.9	20.4	18.0	1.5	2.6
Sub-Saharan Africa	6.4	20.9	34.9	35.4	3.0	5.4
Middle East	9.6	33.7	52.4	53.3	4.5	4.7

### B. Indian Tourism Industry

Tourism is one of the largest and most important sectors in India and it has been growing at a faster rate which will ensure the country's development and has gained good growth in the Tourism Industry. This industry provides heritage, cultural, medical, business film, religious and sports tourism. India provides the facility to both international and domestic travelers to understand and experience the cultural diversity of the country. Over 22.57 million international and 1282 million domestic tourists visiting various parts of

India every year return with a better understanding of the people living in different regions of the country.

Coming into a global perspective, it has been considered as the fastest growing industry in the world with an average growth of 5 % and having about 1000 million travelers around the globe. It claims the largest share of the global economy with more than 10 % of the world GDP and 8 % of the world trade employment as indicated in WTO [world tourism organization] and WTCC statistics.

Total contribution by the travel and tourism sector to India's GDP is expected to increase from US\$ 136.3 billion in 2015 to US\$ 275.2 billion in 2025. India is one of the finest export industries which has already emerged as a crucial instrument for generating employment and travel and tourism is the third largest foreign exchange earner in which US\$ 1.76 billion was earned during September 2016[IBEF].

At 7% Tourism has a very strong association with the socio-economic progress of the country, a multiplier effect on the economy. India's cultural heritage and eco-tourism potentials are major consumer preferences of international visitors. The overall fund allotment for the tourism industry in the 11th five year plan was Rs.3863 crores as against Rs.2900 crores in the 10th five year planning period.

In 2015, the tourism industry earned a respectable Rs. 8.2 trillion and recorded 8.03 million arrivals of foreign tourists in India which is 7% of India's gross Domestic Product (GDP) and 37.4 million jobs almost 9% of total employment. If India overcomes the challenges by enriching its present strategies, it will certainly emerge as the finest tourist destination and yield considerable foreign revenue to its exchequer.

Table- II: Arrival of international and domestic tourist in India

YEAR	Tourist Visits		Annual Growth Rate	
	Domestic(in millions)	Foreign(in millions)	Domestic (in %)	Foreign (in %)
1999	190.67	5.83	13.4	5.3
2003	309.04	6.71	14.6	30.1
2007	526.70	13.27	13.9	12.9
2011	864.53	19.50	15.6	8.9
2015	1431.97	23.33	11.6	4.4

### C. Tourism in Sikkim

Sikkim nestled in the foothills of the eastern Himalayas and nature has gifted this state with unique beauty. It necessarily means awakening the senses and discovering the pristine and mystic beauty of the land and has a peaceful environment,

humble people and a rich cultural heritage.

With the grandeur of her mountain peaks, terraced hills, verdant valleys, fast flowing rivers and lush tropical forest, brilliant with the richness of vivid flowers, birds and butterflies, simple tilted villages and colorful monasteries, is a rare and unique experience. Sikkim is a land of abundance beauty and adventure, whether passion is long treks or short walks in an ever-changing landscape: white-water rafting or mountaineering amongst the world's highest peaks: photographing nature's diversity: or just hanging out, meeting people of other cultures, and enjoying festivals.

Communities, cultures, religions, and customs of different hues intermingle freely here to constitute a homogeneous blend. Hindu Temples coexist with Buddhist Monasteries and there are even a few Christian Churches, Muslim Mosques and Sikh Gurudwara. Although the Buddhists with Monasteries all over the state are the most conspicuous religious group, they are a minority constituting only 28 percent of the population [Sikkim-A Statistical Profile (2004-05).

The majority. 68 percent profess Hinduism. The predominant communities are the Lepchas. Bhutias and Nepalese. In urban areas, many plainmen - Marwari's, Bihari's, Bengalis, South-Indians, and Punjabis - have also settled and they are mostly engaged in business and government services. This beautiful tiny hill state of Sikkim joined Indian Union in 1975 as its 22nd state. The state lying on the eastern tip of the Himalayas bordered by Bhutan, Nepal, and Tibet is considered to be one of the bio-diverse hotspots in the world whose main comparative advantage lies in the tourism sector [Indigenous Herald, Face of North- East India (2006).

If comprehensively developed, tourism could be a key source of both income and employment in the state and bring in a major shift in the social mobilization process.

Sikkim's natural beauty and rich cultural heritage have been attracting a large number of tourists to the state. As a result, tourism is one of the fastest growing industries and has been identified by the government as one of the thrust areas. The number of Tourists visiting Sikkim has shown an increasing trend since 1980. Though during the early years, which was the formative stage, there were slight fluctuations in the tourist flow, from 1990s onwards until recent years there has been a steady increase.

Until the year 1990, there was very little tourism

activity mainly because of the stringent "Inner line permit system" which restricted the movement of the tourist in the state. However, with the sustained effort of the state government and the timely realization of the central government, the inner line permit was relaxed in the year 1990 which led to the unprecedented flow of tourists from the successive years.

Table- III: Arrival of international and domestic tourist in Sikkim

Years	No. of Tourist		
	Domestic	Foreign	Total
Actual			
1990	56706	4719	61425
2000	1442203	8794	152997
2010	3514537	12649	360047
Projected			
2020	842467	18926	835587
2025	1304121	23151	1272940

### III. DESIGN METHODOLOGY

Design methodology refers to the development of a system or method for a unique situation. Today, the term is most often applied to technological fields in about web design, software or information systems design. While working on user interface we have tried and prepared a designed that delivers the best user experience. We have prepared UML (Unified Modeling Language) diagrams such as Use case diagram, Sequence diagram, Activity diagram, Class diagram and ER diagram which helps in understanding how this application functions. These diagrams are listed below:

#### A. Use Case Diagram

Use case diagrams are the blueprint of any applications. It is a behavioral diagram and captures the dynamic aspect of the system and identifies the internal and external factors which influence the system. It is a representation of a user's interaction with the system which shows the relationship between a user and the various use cases in which a user is involved. Anything that interacts with the system, like the human user, internal or external applications will be named as actors.

The use case diagram helps in visualizing the different types of roles in a system and how those roles interact with the system. To present it to others or to make others understand how a system functions, use case diagram is the best way to do it. The purpose of the use case diagram can be said as follows:

- Used to gather requirements of a system.

- Used to get an outside view of a system.
- Identify the external and internal factors that influence the system.
- Show the interaction among the requirements of actors.
- When we plan to draw a use case diagram, we should have the following items identified.
- Functionalities to be represented as a use case.
- Actors.
- Relationship among the use cases and actors

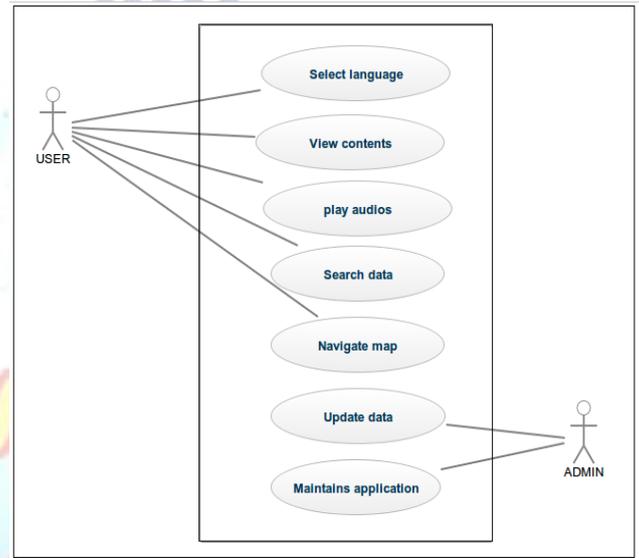


Figure 1: Use case Diagram

#### B. ER Diagram

An Entity Relationship Diagram is a visual representation of different data using conventions that describes how these data are related to each other. Any object, for example, entities, attributes of an entity, relationship sets can be represented with the help of an ER Diagram. They are mostly used during the design stage of a development process to identify the different system elements and their relationship with each other.

There are three basic elements in an ER Diagram: Entity, Attribute, and Relationship. There are more elements that are based on the main elements. They are a weak entity, key attribute, composite attribute, multi-valued attribute, and derived attribute.

A relationship where two entities are participating is called a binary relationship and the number of instances of each entity from a relation that can be associated with other relation is called a Cardinality relationship in an ER Diagram. It can be of three types-

- One-to one: When only one instance of an entity is associated with the relationship, it is marked as one-to-one relationship.

- One-to-many: When one instance of an entity is associated with many instances of another entity, this type of relationship is called as one-to-many relationship.
- Many-to-one: When more than one instance of an entity is associated in a relationship with one instance of another entity, it is called as many-to-one relationship.
- Many-to-many: When more than one instance of an entity is associated with a relationship with more than one instance of another entity.

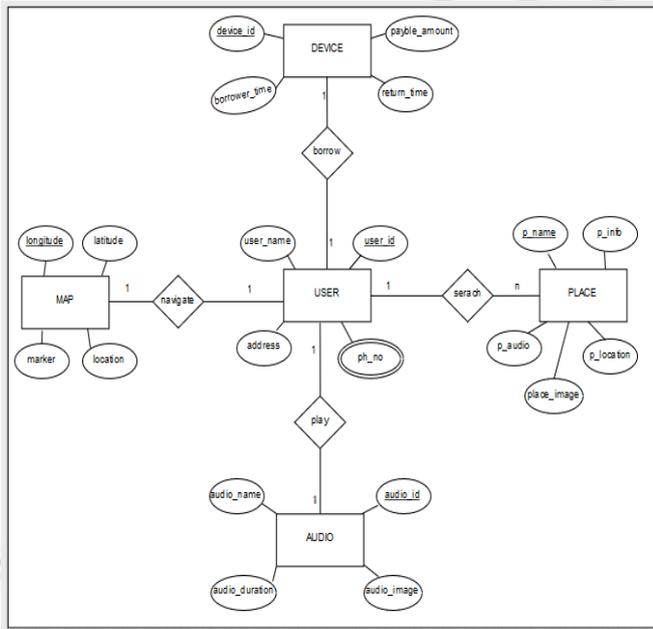


Figure 2: ER Diagram

- Responsibility (attributes and methods) of each class should be identified.
- For each class, a minimum number of properties should be specified, as unnecessary properties will make the diagram complicated.
- Use notes whenever required to describe some aspect of the diagram. At the end of the drawing it should be understandable to the developer/coder.
- Finally, before making the final version, the diagram should be drawn on plain paper and reworked as many times as possible to make it correct.

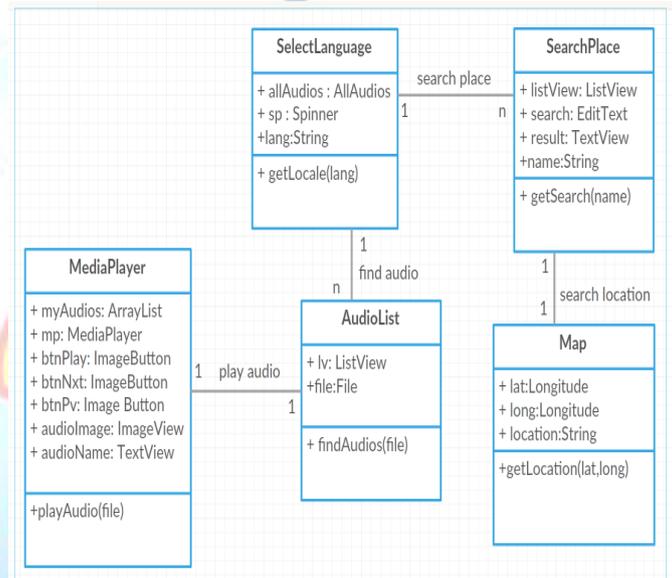


Figure 3: Class Diagram

### C. Class Diagram

A Class diagram is a UML diagram that is used to model the static view of an application. It describes the attributes and operations of a class and also the constraints imposed on the system. It shows the relationship between classes, objects, attributes, and operations.

A class diagram will have three compartments. The top compartment contains the name of the class. It is printed in bold and centered, and the first letter is capitalized. The middle compartment contains the attributes of the class. They are left-aligned and the first letter is lowercase. The bottom compartment contains the operations the class can execute. They are also left-aligned and the first letter is lowercase.

The following are the points that should be remembered while drawing a class diagram-

- The name of the class diagram should be meaningful to describe the aspect of the system.
- Each element and their relationship should be identified in advance.

### D. Sequence Diagram

Sequence diagrams are used for analysis and design purpose which models the flow of logic within a system in a visual manner, enabling us to both document and validate the logic. It focuses on identifying the behavior within the system. It is commonly used by developers to model the interactions between objects in a single use case. It illustrates how the different parts of a system interact with each other to carry out a function, and the order in which the interactions occur when a particular use case is executed. In simpler words, a sequence diagram shows different parts of a system in a sequence to get something done.

Sequence diagram notations: A sequence diagram is structured in such a way that it represents a timeline that begins at the top and descends gradually to mark the sequence of interactions. Each object has a column and the messages exchanged between them are represented by arrows.

Lifelines: When drawing a sequence diagram,

lifeline notation elements are placed across the top of the diagram. Lifelines represent either roles or object instances that participate in the sequence being modeled. It is drawn as a box with a dashed line descending from the center of the bottom edge. The lifeline's name is placed inside the box.

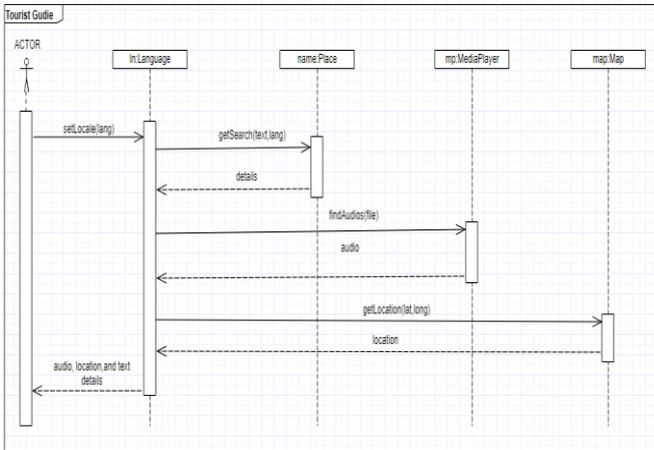


Figure 4: Sequence Diagram

#### E. Activity Diagram

The Activity diagram is another important UML diagram to describe the dynamic aspects of the system. It is a flow chart to represent the flow from one activity to another activity (the activity can be described as an operation of the system). An activity diagram visually presents a series of actions flow of control in a system similar to a flow chart and data flow diagram. They are often used in business process modeling. They can also describe the steps in a use case diagram. Activities modeled can be both sequential and concurrent. In both cases, an activity diagram will have a beginning and an end.

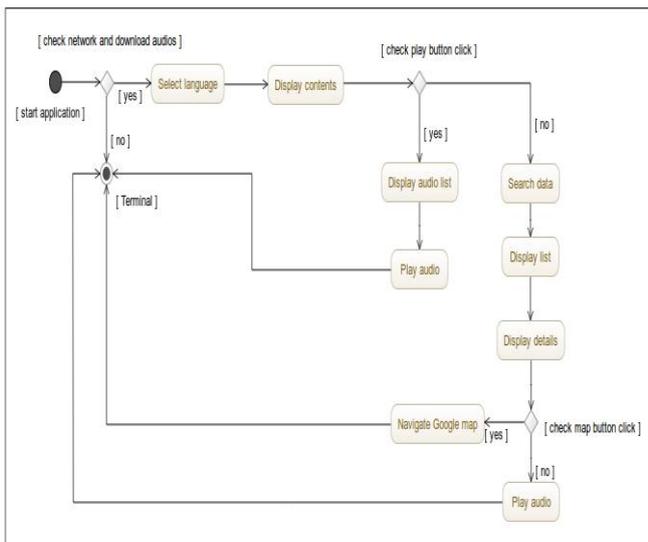


Figure 5: Activity diagram

#### IV. CONCEPT USED

##### A. Android

Android is a mobile phone operating system. It was originally developed by Android Inc., which was acquired by Google in July 2005. Today, development is overseen by the Android Open Source Project (AOSP), led by Google. The AOSP is "tasked with the maintenance and further development of Android".

At the present scenario, Android is leading the market as a mobile operating system with a market share of 86.6% which is further expected to hover around 87.1% due to launches of several 5G devices and iOS has a share of 13.4% of market share which is expected to drop to 12.9% in the years to come.

##### B. Database

A Database is a collection of related data organized in a way that data can be easily accessed, managed and updated. Any piece of information can be data, for example, the name of your school. A Database is a place where a related piece of information is stored and various operations can be performed on it.

It is a collection of schemas, tables, queries, reports, views, and other objects. A DBMS is a computer software application that interacts with the user, other applications, and the database itself to capture and analyze data. Well-known DBMS include MySQL, PostgreSQL, Mango DB, Maria DB, Microsoft SQL Server, Oracle, Sybase, SAP HANA, MemSQL, and IBM DB2.

##### C. PHP

PHP is a server side scripting language designed primarily for web development but also used as a general purpose programming language. Originally created in 1994 by RasmusLerdof, PHP originally stood for Personal Home Page but it now stands for Hypertext Preprocessor. The very first incarnation of PHP was a simple set of Common Gateway Interface (CGI) binaries written in the C Programming language.

PHP code may be embedded into HTML or HTML 5 markup, or it can be used in combination with various web template systems, web content management systems, and web frameworks.

##### D. JSON

JSON (JavaScript Object Notation) is an open standard file format that uses human-readable text to transmit data objects consisting of attribute-value pairs and array data types(or any other

serializable value). It is very common data format used for asynchronous browser/server communication, including as a replacement for XML in some AJAX-style systems.

Douglas Crockford originally specified the JSON format in the early 2000s, two competing standards, RFC 7159 and ECMA-404, defined it in 2013. The ECMA standard describes only the allowed syntax, whereas the RFC covers some security and interoperability considerations.

The official Internet media type for JSON is application/JSON. JSON filename use the extension .json.

#### E. Retrofit

Retrofit is a type-safe HTTP client for Android (or just java) developed by Square. Retrofit makes it easy to connect to a REST web service by translating the API into java Interfaces. The powerful library makes it easy to consume JSON or XML data, which is then parsed into Plain old Java Objects (POJOs). GET, POST, PUT, PATCH, and DELETE requests can all be executed.

Like most open-source software, Retrofit was built on top of some other powerful libraries and tools. Retrofit makes use of OkHttp to handle network request which provides a powerful framework for authenticating and interacting with OKHttp.

Retrofit uses JSON converter libraries to parse from JSON to java objects these libraries are:

GSON:Com.squareup.retrofit:converter-gson

Jackson:Com.squareup.retrofit:converter-jackson

Moshi:Com.squareup.retrofit:converter-moshi.

## V. MODULES

### A. Design Module

An android application consists of several activities. An activity represents a single screen with a user interface just like a window or frame of Java. This module is the overall design of the application for which we have used the following components of android like:

- Spinner View: A Spinner provides a quick way to select one value from a set. In the default state, a spinner shows its currently selected value. Touching the spinner displays a dropdown menu with all other available values, from which the user can select a new one.
- Intent: Intent allows you to interact with components from the same applications as well

as with components contributed by other applications.

- Web View: A Web view is used to display a web page in android. It allows your application to open up web pages within your app without leaving your app.
- List View: A List View is a view which groups several items and displays them in vertically scrollable list. The list items are automatically inserted to the list using an Adapter that pulls content from a source such as an array or database.
- Image Slider: An Image Slider is a unique way to show a series of images on the screen one by one, typically in a prearranged sequence by sliding through them. Sliding through the images can be automatic at regular intervals or manually respond to user interaction like swipe to view next or previous slides.
- Progress Dialog: A Progress Dialog is a dialog box/dialog window that shows the progress of a task. It is used when we want to prevent the user from interacting with the application while waiting.
- Toast: A Toast can be used to display information for a short period of time in a small popup. It contains a message to be displayed quickly and disappears after sometime.

The following are the screenshots of this module:

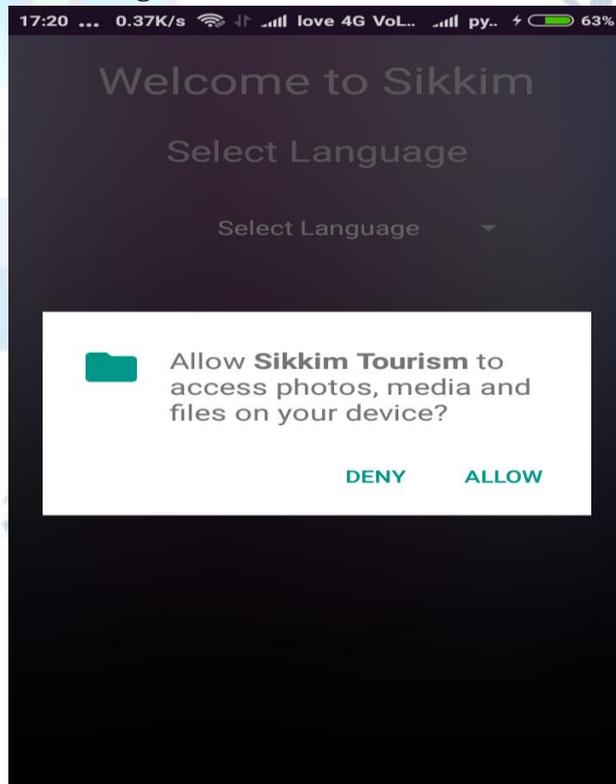


Figure 6: Application's first activity

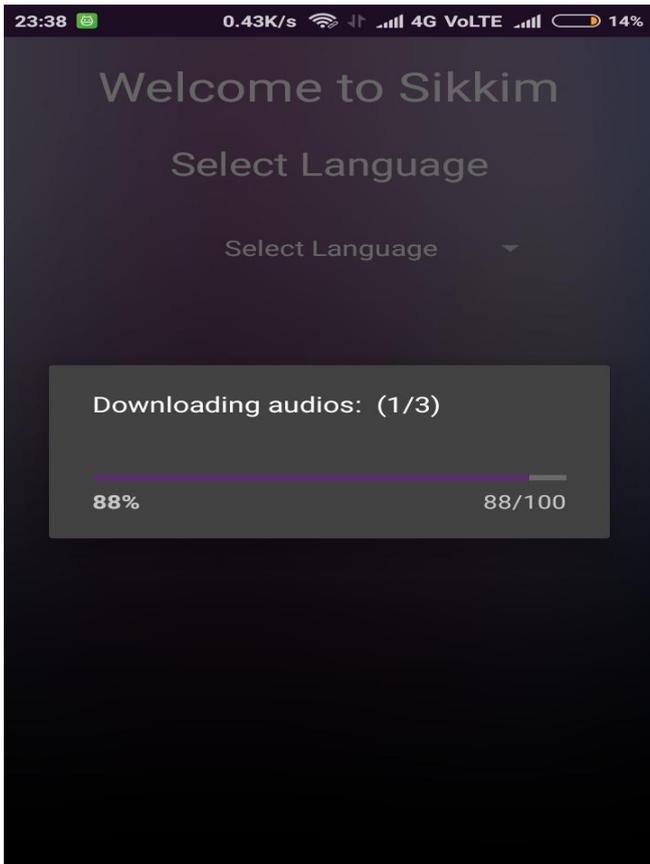


Figure 7: Downloading audios

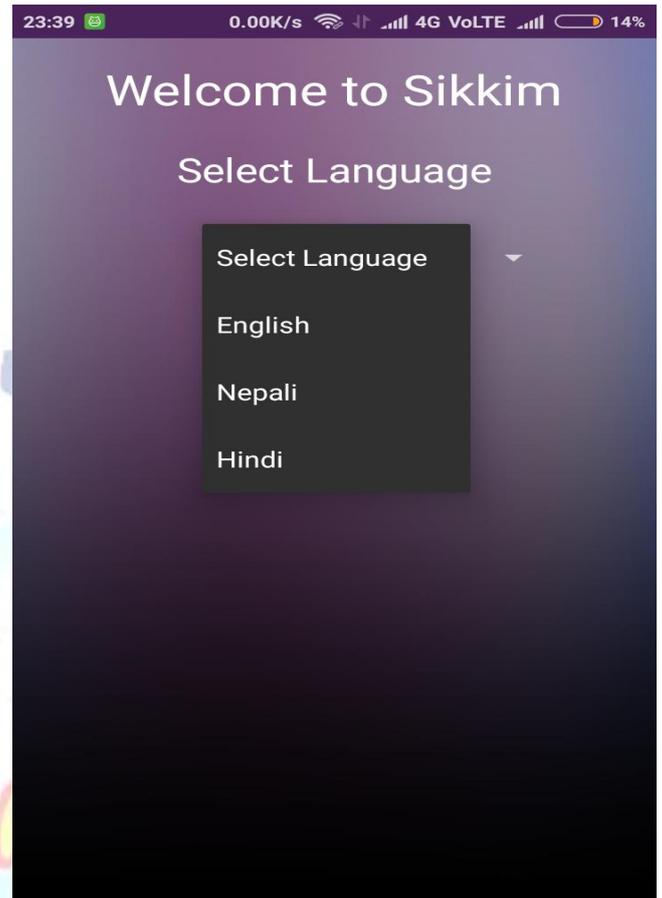


Figure 9: Language selection from drop down

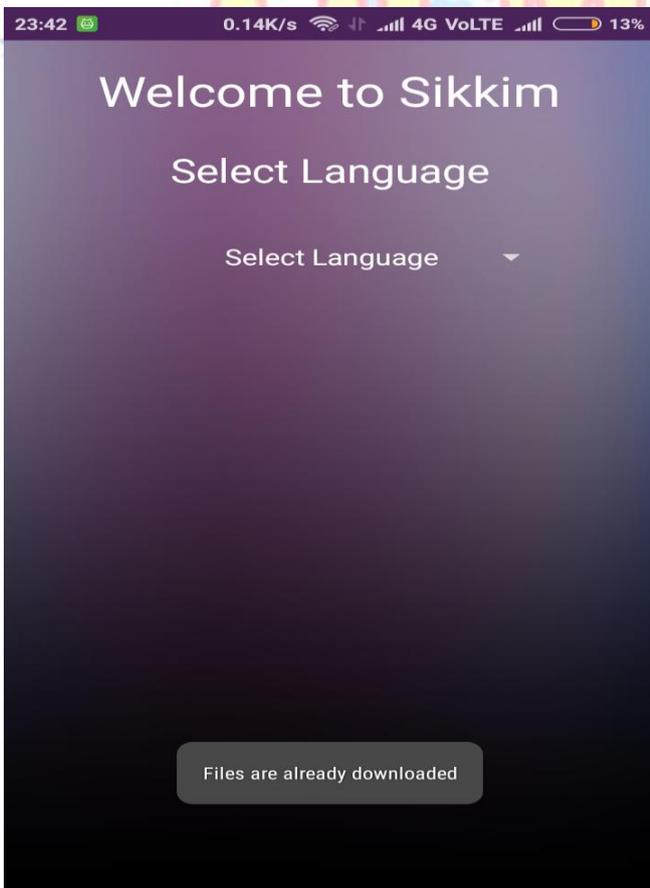


Figure 8: Welcome page

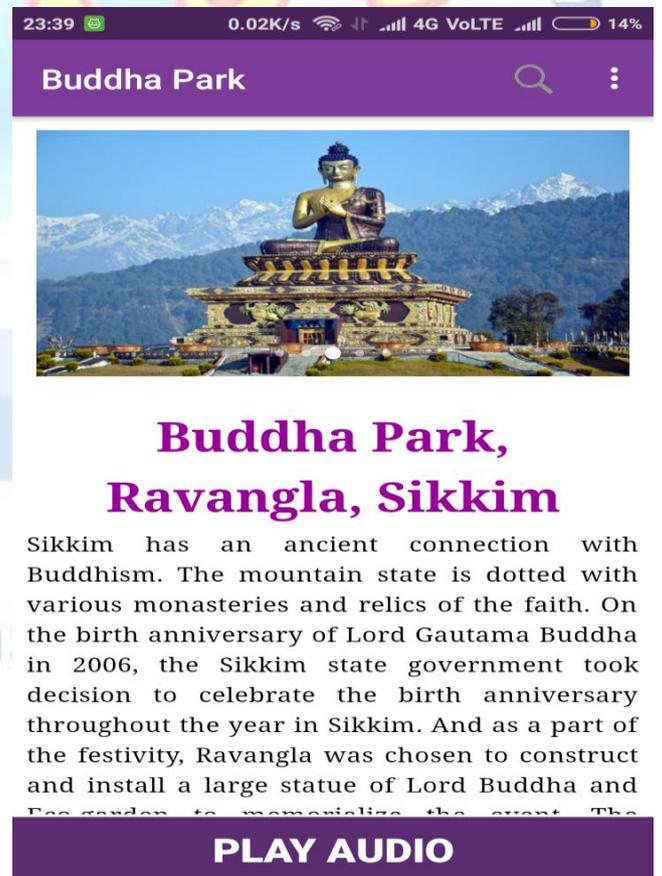


Figure 10: Introduction of Buddha Park

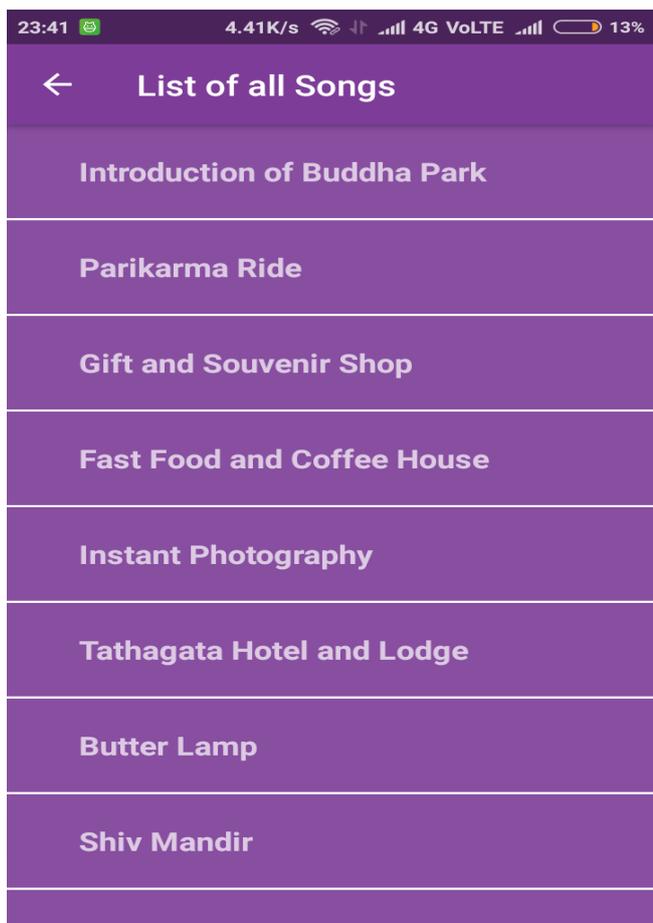


Figure 11: List of voice clips

### B. Music Player Module

The music player is an android application that can play various audios files and can play most of the audio files like .mp3, wav, etc. This music player can play music in the background and it is written using android SDK in java and can run on all android handset. It is required in our project because all our audios will be played with the help of this music player which we have developed.

The following is the screenshot of this module:

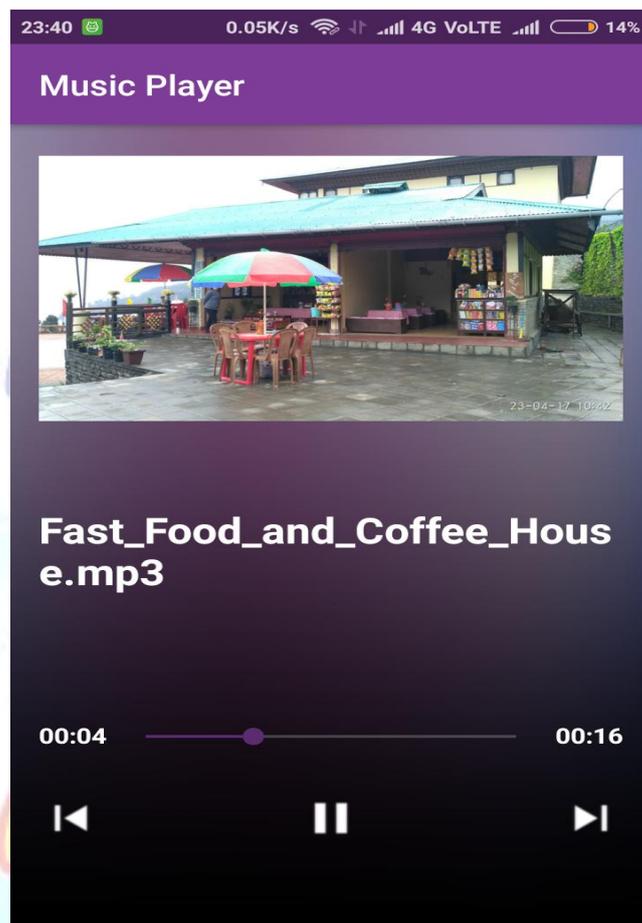


Figure 12: Music player

### C. Download Module

A downloader is required to download audios from the server. In our application, all the audios are downloaded from the server and are stored in the device.

It uses the concept of service which is a component that runs long running operations in the background, once started service can run in the background indefinitely.

The following is the screenshot of this module:

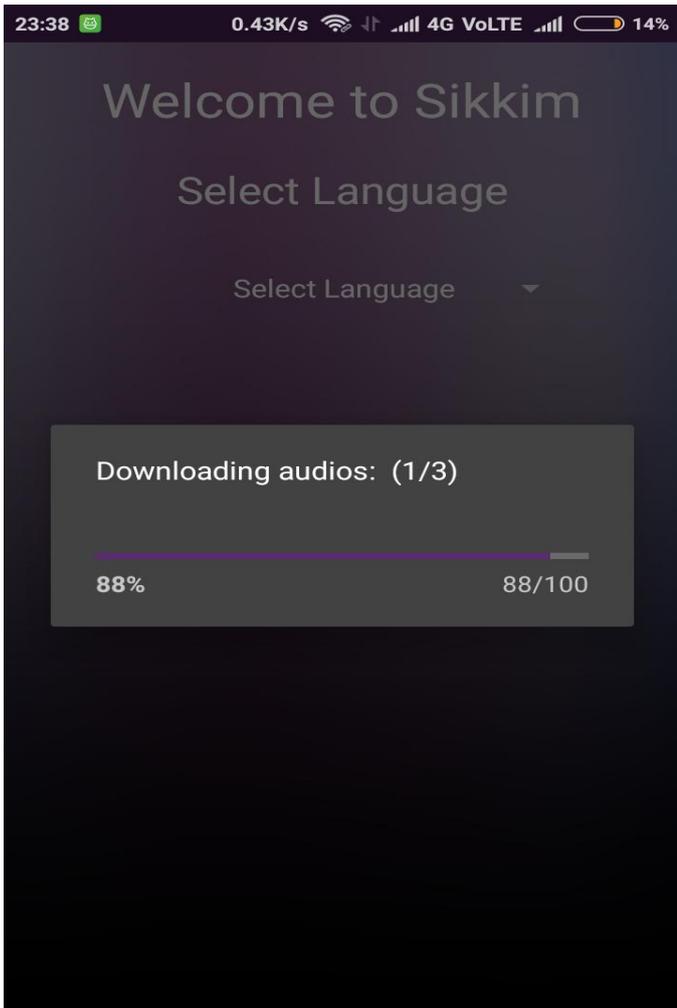


Figure 13: Downloading audios

#### D. Search Module

Search option is provided to the user so that it will be easy for them to search for all the places inside Buddha Park like Restaurant, lodge, temple, and so on.

All the data is stored in the database and is encoded in JSON and is accessed by using RETROFIT.

The following are the screenshots of this module:

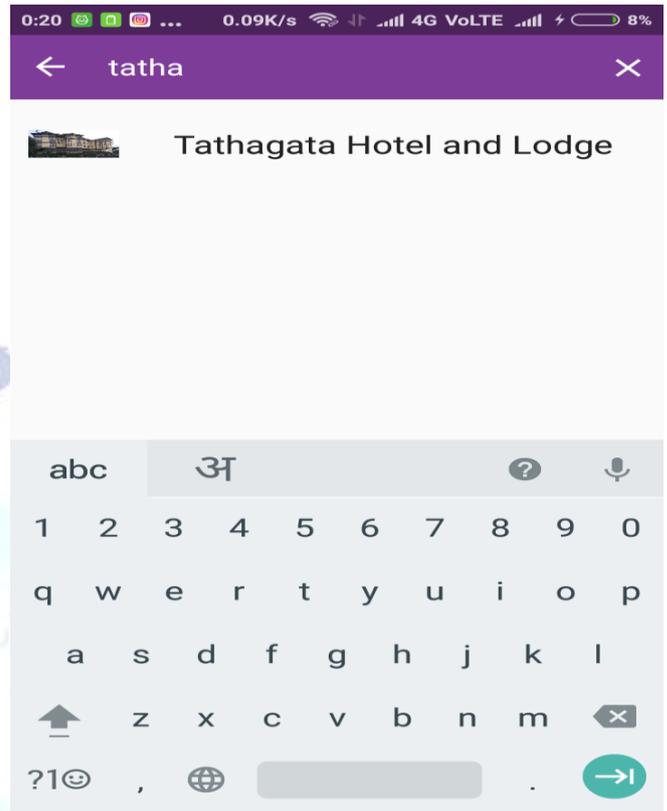


Figure 14: Search

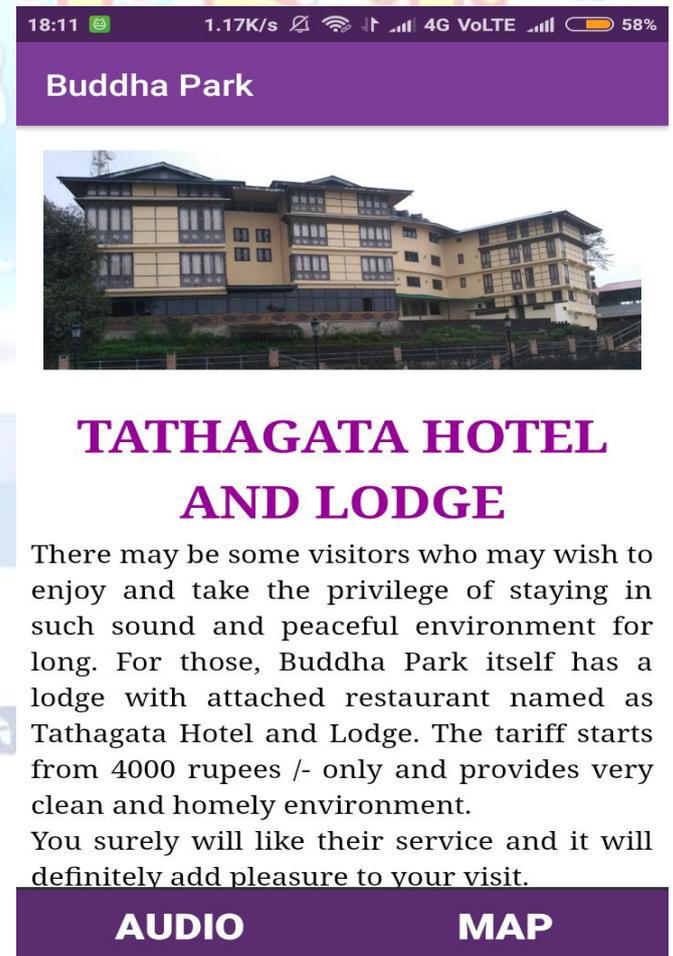


Figure 15: Search result

There may be some visitors who may wish to enjoy and take the privilege of staying in such sound and peaceful environment for long. For those, Buddha Park itself has a lodge with attached restaurant named as Tathagata Hotel and Lodge. The tariff starts from 4000 rupees /- only and provides very clean and homely environment. You surely will like their service and it will definitely add pleasure to your visit.



Figure 16: Voice clip (When click on the audio button)

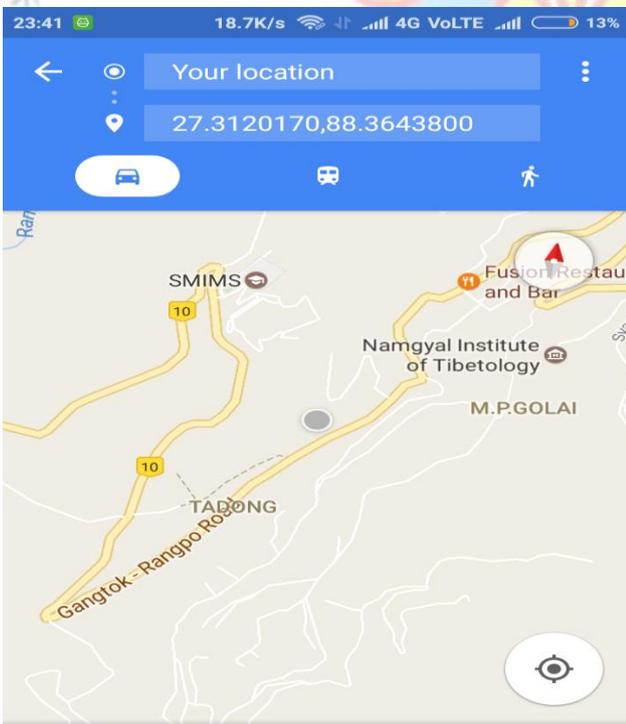


Figure 17: Google map (When click on the map button)

### E. Localization Module

As this application supports three different languages, the concept of Localization is used in which we have provided the contents and audios of the application in three different languages so that the user feels comfortable in knowing the place in their preferred language.

The basic concept of localization is to make any application a multilingual application by collecting the texts into resource files and translate them. In order to localize the strings used in our application, we made two folders under res(Resource folder)with the name of values-hi and values-ne. when the user will select a language, android looks for its string resources in the values-(ISO language Code) folder in the project (For Hindi it loads the string values from values-hi/string.xml).

If the supported language strings.xml misses any string value, android always loads the missing strings from default strings.xml file i.e. values/strings.xml. So it is mandatory that the default stings.xml file should contain all the string values that app uses. Otherwise, the application will crash with Force Close error.

The following is the screenshot of this module:

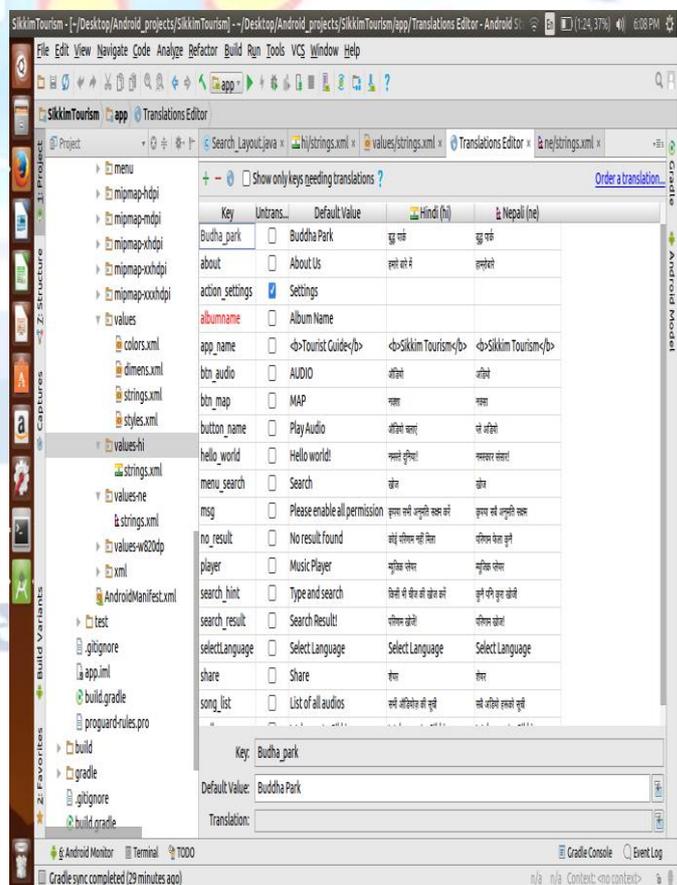


Figure 18: Localization

## VI. CONCLUSION

The advancement in technology and the requirement of users are on a hike at an equal pace. The user's requirement and expectation motivate industries to come up with something extra and unique every time. Earlier the smartphones were used to make calls, click pictures, watch movies but now the users prefer to use their smartphones as their pocket guide.

If we consider the tourism department, it is growing rapidly in the recent period of recession. People like to travel and there may exist some people who are very curious about knowing the tradition, culture, and history of the places they visit. Earlier people used to travel around the world with their travel guides and printed stuff. The Internet was also a means to get information about a particular place but it also has a limit as it doesn't provide all the relevant information.

If we talk about Sikkim, there are many android based applications for tourism that provides the user with the facilities and services related to tourism. But in Sikkim, there is no such application till date that works as a guide for the visitors. All they can do is read about the places over the internet and see the pictures or they can hire a guide to know detail about a place.

To eliminate the above stated problem we have developed, "Tourist Guide" a tourism based android application for Buddha Park, Ravangla, South Sikkim. This is the first android based tourism application in Sikkim. It will act as a virtual guide to the user and allow the user to explore the place on their own. It consists of the entire details of the location with text and pictures along with voice clips in three different languages.

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