VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, BELAGAVI– 590018, KARNATAKA, INDIA

A PROJECT REPORT on

"ONLINE CAR MAGZINE"

Submitted in partial fulfilment of the requirements for the award of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE & ENGINEERING

Submitted By

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Affiliated to Visvesvaraya Technological University and Approved by AICTE New Delhi & Govt., of Karnataka Nehru Nagar, Puttur - 574 203, DK, Karnataka, India.

JULY, 2021

CERTIFICATE

Certified that the project work entitled **"ONLINE CAR MAGZINE"** is carried out by **SAMPATH KUMAR P L, PAWAN BHARADWAJ N P** bearing USNs **4VP18CS074, 4VP18CS059** respectively bona fide students of **Vivekananda College of Engineering & Technology, Puttur** in partial fulfilment for the award of **Bachelor of Engineering** in **Computer Science & Engineering** of the **Visvesvaraya Technological University, Belagavi** during the year 2020-21. It is certified that all corrections/suggestions indicated during Internal Assessment have been incorporated in the report deposited in the departmental library.

The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

_____ _____

Signature of the Guide Mrs. Bharathi K

Signature of the HOD Mr. Krishna Mohana A J

ACKNOWLEDGEMENT

We take this opportunity to express our deep heartfelt gratitude to all those people who have helped us in the successful completion of the project.

First and foremost, we would like to express our sincere gratitude to our guides, **Mrs. Bharathi K**, for providing excellent guidance, encouragement and inspiration throughout the project work. Without her invaluable guidance, this work would never have been a successful one

We would like to express my sincere gratitude to our Head of the Department of Computer Science &Engineering, **Mr. Krishna Mohana A J** for his guidance and inspiration.

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We are thankful to all the teaching and non-teaching staff members of Computer Science & Engineering Department for their help and needed support rendered throughout the project.

DECLARATION

We, **SAMPATH KUMAR P L (4VP18CS074), PAWAN BHARADWAJ N P (4VP18CS059)** students of sixth semester B. E. in Computer Science & Engineering, **Vivekananda College of Engineering & Technology**, Puttur, hereby declare that the project work entitled **"ONLINE CAR MAGZINE"** has been carried out and duly executed by me at VCET, Puttur, under the guidance of **Mrs. Bharathi K**, Assistant Professor, Department of Computer Science & Engineering, Vivekananda College of Engineering & Technology, Puttur, and submitted in partial fulfilment of the requirements for the award of degree in **Bachelor of Engineering in Computer Science & Engineering** by **Visvesvaraya Technological University**, Belagavi during the academic year 2020-2021

SAMPATH KUMAR P L **4VP18CS074**

PAWAN BHARADWAJ N P **4VP18CS059**

Date: 07 - 08 - 2021

Place: VCET, PUTTUR

ABSTRACT

This app deals with development of online car magazine, an integrated application to view different cars with their photos and names. This application can help us to view different car and it displays the name of the car. This app contains more than thirty cars along with their names.so users can check different cars easily through this app.

The interface for this app is so easy and simple to use, so that the users can easily understand the app functionality

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Chapter 1

Introduction

1.1 Mobile Application Development

Mobile application development is the process to making software for smartphones and digital assistants, most commonly for Android and iOS. The software can be preinstalled on the device, downloaded from a mobile app store or accessed through a mobile web browser. The programming and markup languages used for this kind of software development include Java, XML.

Mobile app development is rapidly growing. From retail, telecommunications and e-commerce to insurance, healthcare and government, organizations across industries must meet user expectations for real-time, convenient ways to conduct transactions and access information. Today, mobile devices—and the mobile applications that unlock their value—are the most popular way for people and businesses to connect to the internet. To stay relevant, responsive and successful, organizations need to develop the mobile applications that their customers, partners and employee's demand.

1.2 About Project

we have created an app that deals with development of online car magazine, an integrated application to view different cars with their photos and names. This app contains more than thirty cars along with their names.so users can check different cars easily through this app. The interface for this app is so easy and simple to use, so that the users can easily use this app.

Chapter 2

Requirement Analysis

2.1 Functional Requirements

Functional Requirements describe how product must behave what its features and function. Generally, functional requirement describes system behaviour under specific condition. Our project has the following modules:

- Grid of car view: Here all the cars are visible in table like content.

2.2 Non-Functional Requirements

Non-functional requirements describe the general characteristics of a system. They are also known as quality attributes. Non-functional requirements describe how a system must behave and establish constraints of its functionality. Some typical non-functional requirements are:

Scalability: Application supports for large number of users.

- **Safety:** The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup.
- **Security:** System will use secured database. Normal users can just read the information but they cannot edit or modify anything except their personal and some other information and every user has access constraints.
- **User friendly:** System is very interactive.
- **Availability:** The application is made available all time.

2.3 Hardware Requirement

The most common set of requirements defined by any operating system or software application is the physical computer resources, also known as hardware. A hardware requirements list is often accompanied by a hardware compatibility list (HCL), especially in case of operating systems. An HCL lists tested, compatibility and sometimes incompatible hardware devices for a particular operating system or application. The following sub-sections discuss the various aspects of hardware requirements.

Processor	-	Intel processor on Windows or Linux.
RAM	-	2GB RAM recommended; plus 1 GB for the Android Emulator
SSD	-	250GB
Free digital storage	-	2 GB

Chapter 3

Software Requirement Specification

3.1 Software Requirements

Software Requirements deal with defining software resource requirements and pre-requisites that need to be installed on a computer to provide optimal functioning of an application. These requirements or pre-requisites are generally not included in the software installation package and need to be installed separately before the software is installed.

Operating System	-	64-bit Microsoft® Windows® 8/10 or MacOS 10
Languages	-	XML and Java
Screen	-	1280 x 800 minimum screen resolution.
Software	-	IDE + Android SDK + Android Emulator

3.2 Android

Android is an open source and Linux-based **Operating System** for mobile devices such as smartphones and tablet computers. Android was developed by the *Open Handset Alliance*, led by Google, and other companies.

Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android.

The first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 where as the first commercial version, Android 1.0, was released in September 2008.

On June 27, 2012, at the Google I/O conference, Google announced the next Android version, 4.1 **Jelly Bean**. Jelly Bean is an incremental update, with the primary aim of improving the user interface, both in terms of functionality and performance.

The source code for Android is available under free and open-source software licenses. Google publishes most of the code under the Apache License version 2.0 and the rest, Linux kernel changes, under the GNU General Public License version 2.

3.3 Android Architecture

Android operating system is a stack of software components which is roughly divided into five sections and four main layers as shown below in the architecture diagram.

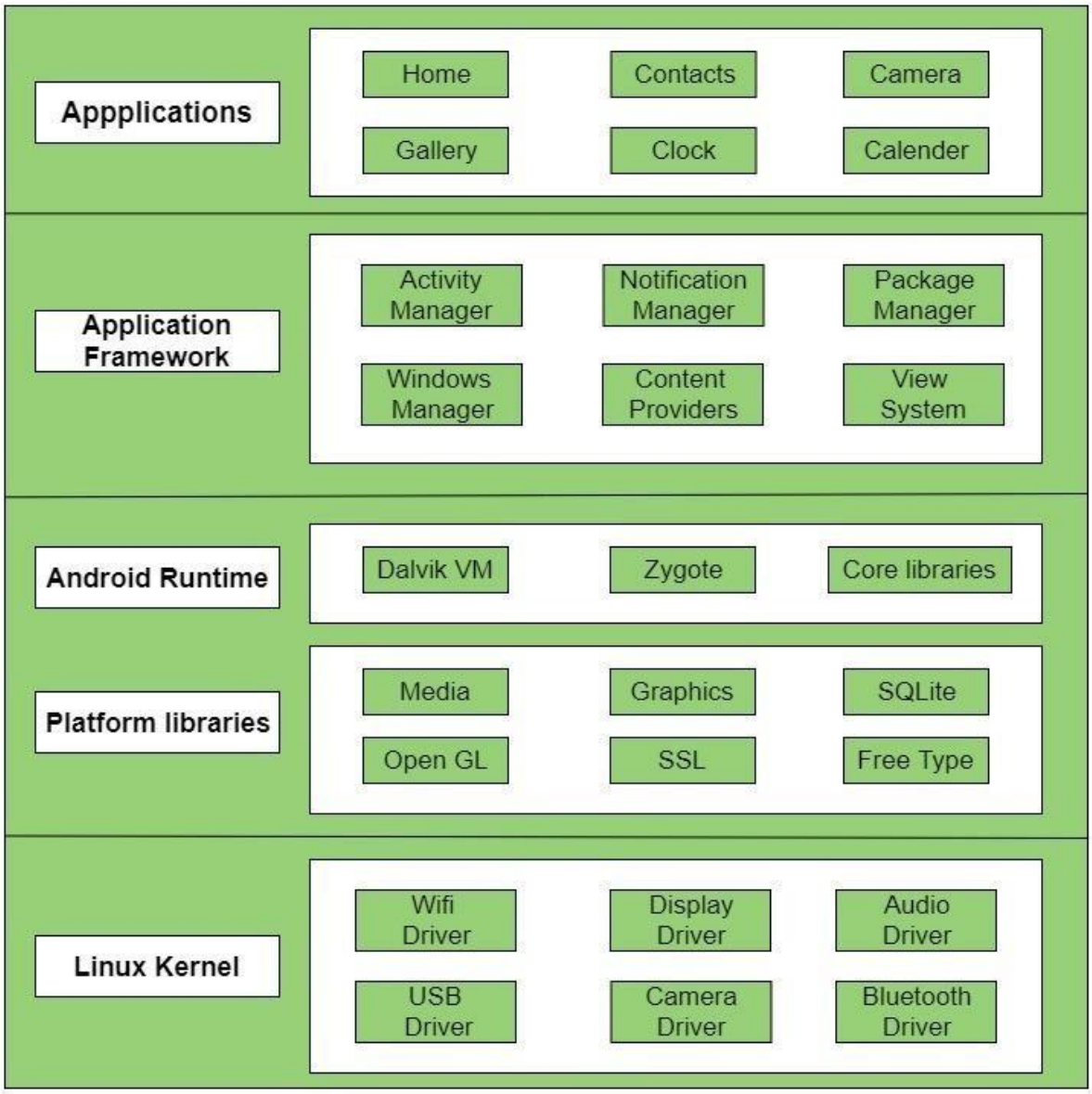

Fig. 1 Linux kernel

At the bottom of the layers is Linux - Linux 3.6 with approximately 115 patches. This provides a level of abstraction between the device hardware and it contains all the essential hardware drivers like camera, keypad, display etc. Also, the kernel handles all the things that Linux is really good at such as networking and a vast array of device drivers, which take the pain out of interfacing to peripheral hardware.

Libraries

On top of Linux kernel there is a set of libraries including open-source Web browser engine WebKit, well known library libc, SQLite database which is a useful repository for storage and sharing of application data, libraries to play and record audio and video, SSL libraries responsible for Internet security etc.

Android Libraries

This category encompasses those Java-based libraries that are specific to Android development. Examples of libraries in this category include the application framework libraries in addition to those that facilitate user interface building, graphics drawing and database access. A summary of some key core Android libraries available to the Android developer is as follows −

- **android.app** − Provides access to the application model and is the cornerstone of all Android applications.
- **android.content** − Facilitates content access, publishing and messaging between applications and application components.
- **android.database** − Used to access data published by content providers and includes SQLite database management classes.
- **android.opengl** − A Java interface to the OpenGL ES 3D graphics rendering API.
- **android.os** − Provides applications with access to standard operating system services including messages, system services and inter-process communication.
- **android.text** − Used to render and manipulate text on a device display.
- **android.view** − The fundamental building blocks of application user interfaces.
- **android.widget** − A rich collection of pre-built user interface components such as buttons, labels, list views, layout managers, radio buttons etc.
- **android.webkit** − A set of classes intended to allow web-browsing capabilities to be built into applications.

Having covered the Java-based core libraries in the Android runtime, it is now time to turn our attention to the C/C++ based libraries contained in this layer of the Android software stack.

Android Runtime

This is the third section of the architecture and available on the second layer from the bottom. This section provides a key component called **Dalvik Virtual Machine** which is a kind of Java Virtual Machine specially designed and optimized for Android.

The Dalvik VM makes use of Linux core features like memory management and multithreading, which is intrinsic in the Java language. The Dalvik VM enables every Android application to run in its own process, with its own instance of the Dalvik virtual machine.

The Android runtime also provides a set of core libraries which enable Android application developers to write Android applications using standard Java programming language.

Application Framework

The Application Framework layer provides many higher-level services to applications in the form of Java classes. Application developers are allowed to make use of these services in their applications.

The Android framework includes the following key services −

- **Activity Manager** − Controls all aspects of the application lifecycle and activity stack.
- **Content Providers** − Allows applications to publish and share data with other applications.
- **Resource Manager** − Provides access to non-code embedded resources such as strings, color settings and user interface layouts.
- **Notifications Manager** − Allows applications to display alerts and notifications to the user.
- **View System** − An extensible set of views used to create application user interfaces.

Applications

You will find all the Android application at the top layer. You will write your application to be installed on this layer only. Examples of such applications are Contacts Books, Browser, Games etc.

3.4 Software Development Kit

A software development kit (SDK) is a set of tools provided by the manufacturer of (usually) a hardware platform, operating system (OS), or programming language. SDKs help software developers create applications for that specific platform, system, or programming language.

Think of it kind of like a toolkit, or the plastic bag of tools that comes packaged with the parts of a dresser you've bought to assemble yourself—only for app development. You have the building blocks—or development tools—you need to get the job done, and what's included in the kit varies from manufacturer to manufacturer.

Typically, a basic SDK will include a compiler, debugger, and application programming interfaces (APIs), but they can also include any of the following:

- Documentation
- Libraries
- Editors
- Runtime/development environments
- Testing/analysis tools
- Drivers
- Network protocols

3.5 Android Studio

Android Studio is the official Integrated Development Environment (IDE) for android application development. Android Studio provides more features that enhance our productivity while building Android apps.

Android Studio was announced on 16th May 2013 at the Google I/O conference as an official

IDE for Android app development. It started its early access preview from version 0.1 in May 2013. The first stable built version was released in December 2014, starts from version 1.0.

Since 7th May 2019, Kotlin is Google's preferred language for Android application development. Besides this, other programming languages are supported by Android Studio.

Features of Android Studio ○ It has a flexible Gradle-based

build system. ○ It has a fast and feature-rich emulator for

app testing.

- Android Studio has a consolidated environment where we can develop for all Android devices.
- Apply changes to the resource code of our running app without restarting the app. ○ Android Studio provides extensive testing tools and frameworks. ○ It supports C++ and NDK.
- It provides build-in supports for Google Cloud Platform. It makes it easy to integrate Google Cloud Messaging and App Engine.

Chapter 4

Implementation

4.1 Module Implementation

Online car Module

Input: No input required.

Output: The app helps to see all the types of cars.

Description: the app will display all the related cars in grid view with specified information like its image and name of the car .

4.2 Code

Activity_main.java

```
package com.example.myapplication;
import android.content.ActivityNotFoundException;
import android.content.Intent;
import android.os.Bundle;
import android.speech.RecognizerIntent;
import android.view.View;
import android.widget.ImageButton;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;
import java.util.Locale;

public class MainActivity extends AppCompatActivity {

    private static final int REQ_CODE_SPEECH_INPUT = 100;
    private TextView mVoiceInputTv;
    private ImageButton mSpeakBtn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        mVoiceInputTv = (TextView) findViewById(R.id.voiceInput);
        mSpeakBtn = (ImageButton) findViewById(R.id.btnSpeak);
        mSpeakBtn.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                startVoiceInput();
            }
```

```
        });
    }

    private void startVoiceInput() {
        Intent intent = new Intent(RecognizerIntent.ACTION_RECOGNIZE_SPEECH);
        intent.putExtra(RecognizerIntent.EXTRA_LANGUAGE_MODEL,
RecognizerIntent.LANGUAGE_MODEL_FREE_FORM);
        intent.putExtra(RecognizerIntent.EXTRA_LANGUAGE, Locale.getDefault());
        intent.putExtra(RecognizerIntent.EXTRA_PROMPT, "Hello, How can I help
you?");
        try {
            startActivityForResult(intent, REQ_CODE_SPEECH_INPUT);
        } catch (ActivityNotFoundException a) {

        }
    }

    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data)
{
        super.onActivityResult(requestCode, resultCode, data);

        switch (requestCode) {
            case REQ_CODE_SPEECH_INPUT: {
                if (resultCode == RESULT_OK && null != data) {
                    ArrayList<String> result =
data.getStringArrayListExtra(RecognizerIntent.EXTRA_RESULTS);
                    mVoiceInputTv.setText(result.get(0));
                }
                break;
            }

        }
    }
}
```

MainActivity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#BDBBA2"
    android:gravity="center"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent"

        >

        <LinearLayout
```

```
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            android:layout_height="match_parent"
            android:orientation="vertical">

            <LinearLayout
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                android:layout_height="134dp"
                android:orientation="horizontal">

                <LinearLayout
                    android:layout_width="135dp"
                    android:layout_height="match_parent"
                    android:orientation="horizontal">

                    <LinearLayout
                        android:layout_width="130dp"
                        android:layout_height="match_parent"
                        android:orientation="vertical">

                        <ImageView
                            android:id="@+id/carsssfad123"
                            android:layout_width="match_parent"
                            android:layout_height="93dp"
                            app:srcCompat="@drawable/img2" />

                        <TextView
                            android:id="@+id/textVvisfdgew34"
                            android:layout_width="match_parent"
                            android:layout_height="wrap_content"
                            android:text="mercedes benz" />
                    </LinearLayout>
                </LinearLayout>

                <LinearLayout
                    android:layout_width="138dp"
                    android:layout_height="match_parent"
                    android:orientation="horizontal">

                    <LinearLayout
                        android:layout_width="130dp"
                        android:layout_height="match_parent"
                        android:orientation="vertical">

                        <ImageView
                            android:id="@+id/cargfdss123"
                            android:layout_width="match_parent"
                            android:layout_height="93dp"
                            app:srcCompat="@drawable/img1" />

                        <TextView
                            android:id="@+id/textVvdsfgiew34"
                            android:layout_width="match_parent"
                            android:layout_height="wrap_content"
                            android:text="bmw" />
                    </LinearLayout>
                </LinearLayout>
```

```
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                android:orientation="horizontal">

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                    android:layout_height="match_parent"
                    android:orientation="vertical">

                    <ImageView
                        android:id="@+id/carfsgss123"
                        android:layout_width="match_parent"
                        android:layout_height="93dp"
                        app:srcCompat="@drawable/audi_a5" />

                    <TextView
                        android:id="@+id/textVvsdgiew34"
                        android:layout_width="match_parent"
                        android:layout_height="wrap_content"
                        android:text="Audi A5" />
                </LinearLayout>
            </LinearLayout>
        </LinearLayout>

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="124dp"
            android:orientation="horizontal">

            <LinearLayout
                android:layout_width="136dp"
                android:layout_height="match_parent"
                android:orientation="vertical">

                <ImageView
                    android:id="@+id/cargdsss123"
                    android:layout_width="126dp"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/audi_r55_coupe" />

                <TextView
                    android:id="@+id/textVviesgdw34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="Audi R55 coupe" />
            </LinearLayout>

            <LinearLayout
                android:layout_width="135dp"
                android:layout_height="match_parent"
                android:orientation="vertical">

                <ImageView
                    android:id="@+id/cagsrss123"
                    android:layout_width="match_parent"
                    android:layout_height="93dp"
```

```
                app:srcCompat="@drawable/bently_continental_gt" />

            <TextView
                android:id="@+id/textVvidfgew34"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="bently contenental GT" />
        </LinearLayout>

        <LinearLayout
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            <ImageView
                android:id="@+id/cagsfrss123"
                android:layout_width="match_parent"
                android:layout_height="93dp"
                app:srcCompat="@drawable/bmw_118i" />

            <TextView
                android:id="@+id/textVvsdgdsiew34"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="bmw 118i" />
        </LinearLayout>
    </LinearLayout>

    <LinearLayout
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        android:orientation="horizontal">

        <LinearLayout
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            android:orientation="horizontal">

            <LinearLayout
                android:layout_width="130dp"
                android:layout_height="match_parent"
                android:orientation="vertical">

                <ImageView
                    android:id="@+id/cargfdhss123"
                    android:layout_width="match_parent"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/bmw_2_series" />

                <TextView
                    android:id="@+id/textVviesfsfw34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="bmw 2 series" />
            </LinearLayout>
        </LinearLayout>
```

```
            <LinearLayout
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                android:orientation="horizontal">

                <LinearLayout
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                    android:layout_height="match_parent"
                    android:orientation="vertical">

                    <ImageView
                        android:id="@+id/carsweyts123"
                        android:layout_width="match_parent"
                        android:layout_height="93dp"
                        app:srcCompat="@drawable/bugati_chiron" />

                    <TextView
                        android:id="@+id/textVvihkkew34"
                        android:layout_width="match_parent"
                        android:layout_height="wrap_content"
                        android:text="bugati chiron" />
                </LinearLayout>
            </LinearLayout>

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                android:orientation="horizontal">

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                    android:layout_width="130dp"
                    android:layout_height="match_parent"
                    android:orientation="vertical">

                    <ImageView
                        android:id="@+id/car452342ss123"
                        android:layout_width="match_parent"
                        android:layout_height="93dp"
                        app:srcCompat="@drawable/m3" />

                    <TextView
                        android:id="@+id/textV6545view34"
                        android:layout_width="match_parent"
                        android:layout_height="wrap_content"
                        android:text="bmw m3" />
                </LinearLayout>
            </LinearLayout>
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                android:layout_height="match_parent"
```

```
                android:orientation="vertical">

                <ImageView
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                    android:layout_width="match_parent"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/mahindra_thar" />

                <TextView
                    android:id="@+id/textVview34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="mahindra thar" />
            </LinearLayout>

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                android:orientation="vertical">

                <ImageView
                    android:id="@+id/cards123"
                    android:layout_width="match_parent"
                    android:layout_height="88dp"
                    app:srcCompat="@drawable/maruti_alto" />

                <TextView
                    android:id="@+id/textVfiew34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="maruti alto" />
            </LinearLayout>

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                android:layout_height="match_parent"
                android:orientation="vertical">

                <ImageView
                    android:id="@+id/cars1a23"
                    android:layout_width="120dp"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/maruti_celerio_x" />

                <TextView
                    android:id="@+id/textVifw34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="maruti  celerio x" />
            </LinearLayout>
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```

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                <ImageView
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                    android:layout_width="148dp"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/maruti_ignis" />

                <TextView
                    android:id="@+id/textViaew34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="maruti ignis" />
            </LinearLayout>

            <LinearLayout
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                android:layout_height="match_parent"
                android:orientation="vertical">

                <ImageView
                    android:id="@+id/carse123"
                    android:layout_width="144dp"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/maruti_ritz" />

                <TextView
                    android:id="@+id/textVigew34"
                    android:layout_width="match_parent"
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                    app:srcCompat="@drawable/maruti_suzuki" />

                <TextView
                    android:id="@+id/textgView34"
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                    android:layout_width="148dp"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/porsche_911" />

                <TextView
                    android:id="@+id/textgfView34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="porsche 911" />
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                    android:layout_height="93dp"
                    app:srcCompat="@drawable/porsche_convertible" />

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                    android:text="porsche convertible" />
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            <LinearLayout
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                android:layout_height="match_parent"
                android:orientation="vertical">

                <ImageView
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                    android:layout_width="match_parent"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/suzuki_baleno" />

                <TextView
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                    android:layout_height="wrap_content"
                    android:text="suzuki baleno" />
            </LinearLayout>
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```

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                    android:id="@+id/carsdgs123"
                    android:layout_width="148dp"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/suzuki_samurai" />

                <TextView
                    android:id="@+id/textsgdView34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="suzuki samurai" />
            </LinearLayout>

            <LinearLayout
                android:layout_width="139dp"
                android:layout_height="match_parent"
                android:orientation="vertical">

                <ImageView
                    android:id="@+id/cars1sgd23"
                    android:layout_width="148dp"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/audi_a1" />

                <TextView
                    android:id="@+id/textVigsdew34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="audi a1" />
            </LinearLayout>

            <LinearLayout
                android:layout_width="135dp"
                android:layout_height="match_parent"
                android:orientation="vertical">

                <ImageView
                    android:id="@+id/cargsds123"
                    android:layout_width="match_parent"
                    android:layout_height="93dp"
                    app:srcCompat="@drawable/honda_civic" />

                <TextView
                    android:id="@+id/textVisgdew34"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
```

```
                android:text="Honda civic" />
        </LinearLayout>
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="130dp"
        android:orientation="horizontal">

        <LinearLayout
            android:layout_width="130dp"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <ImageView
                android:id="@+id/cars1gsdf23"
                android:layout_width="148dp"
                android:layout_height="93dp"
                app:srcCompat="@drawable/honda_civic_type_r" />

            <TextView
                android:id="@+id/textViewdhfg34"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Honda civic type r" />
        </LinearLayout>

        <LinearLayout
            android:layout_width="135dp"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <ImageView
                android:id="@+id/carshdt123"
                android:layout_width="148dp"
                android:layout_height="93dp"
                app:srcCompat="@drawable/honda_hybrid" />

            <TextView
                android:id="@+id/textViedhgw34"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Honda hybrid" />
        </LinearLayout>

        <LinearLayout
            android:layout_width="141dp"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <ImageView
                android:id="@+id/cardhfts123"
                android:layout_width="148dp"
                android:layout_height="93dp"
                app:srcCompat="@drawable/kia_forte_sedan" />

            <TextView
```

```
                android:id="@+id/textViewhfgd34"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Kia forte seda" />
        </LinearLayout>
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="130dp"
        android:orientation="horizontal">

        <LinearLayout
            android:layout_width="128dp"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <ImageView
                android:id="@+id/cars123"
                android:layout_width="match_parent"
                android:layout_height="93dp"
                app:srcCompat="@drawable/kia_nero" />

            <TextView
                android:id="@+id/textView34"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Kia nero" />
        </LinearLayout>

        <LinearLayout
            android:layout_width="152dp"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <ImageView
                android:id="@+id/imageView4"
                android:layout_width="match_parent"
                android:layout_height="93dp"
                app:srcCompat="@drawable/kia_optima" />

            <TextView
                android:id="@+id/textView6"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Kia optima" />
        </LinearLayout>

        <LinearLayout
            android:layout_width="131dp"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <ImageView
                android:id="@+id/imageView5"
                android:layout_width="match_parent"
                android:layout_height="93dp"
```

```
                app:srcCompat="@drawable/lamborgini_hurican" />

            <TextView
                android:id="@+id/textView7"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Lamborgini hurican" />
        </LinearLayout>
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="135dp"
        android:orientation="horizontal">

        <LinearLayout
            android:layout_width="126dp"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <ImageView
                android:id="@+id/imageView"
                android:layout_width="match_parent"
                android:layout_height="88dp"
                app:srcCompat="@drawable/land_rover_discovery" />

            <TextView
                android:id="@+id/textView"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Land Rover Discovery" />

        </LinearLayout>

        <LinearLayout
            android:layout_width="126dp"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <ImageView
                android:id="@+id/imageView1"
                android:layout_width="match_parent"
                android:layout_height="88dp"
                app:srcCompat="@drawable/renault_duster" />

            <TextView
                android:id="@+id/textView2"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Renault duster" />

        </LinearLayout>

        <LinearLayout
            android:layout_width="161dp"
            android:layout_height="match_parent"
            android:orientation="vertical">
```

```
                    <ImageView
                        android:id="@+id/imageView3"
                        android:layout_width="match_parent"
                        android:layout_height="88dp"
                        app:srcCompat="@drawable/renault_kadjar" />

                    <TextView
                        android:id="@+id/textView4"
                        android:layout_width="match_parent"
                        android:layout_height="wrap_content"
                        android:text="Renault kadjar" />

                </LinearLayout>


            </LinearLayout>
        </LinearLayout>
    </ScrollView>

</LinearLayout>
```

Chapter 5

Result

Fig 2.1

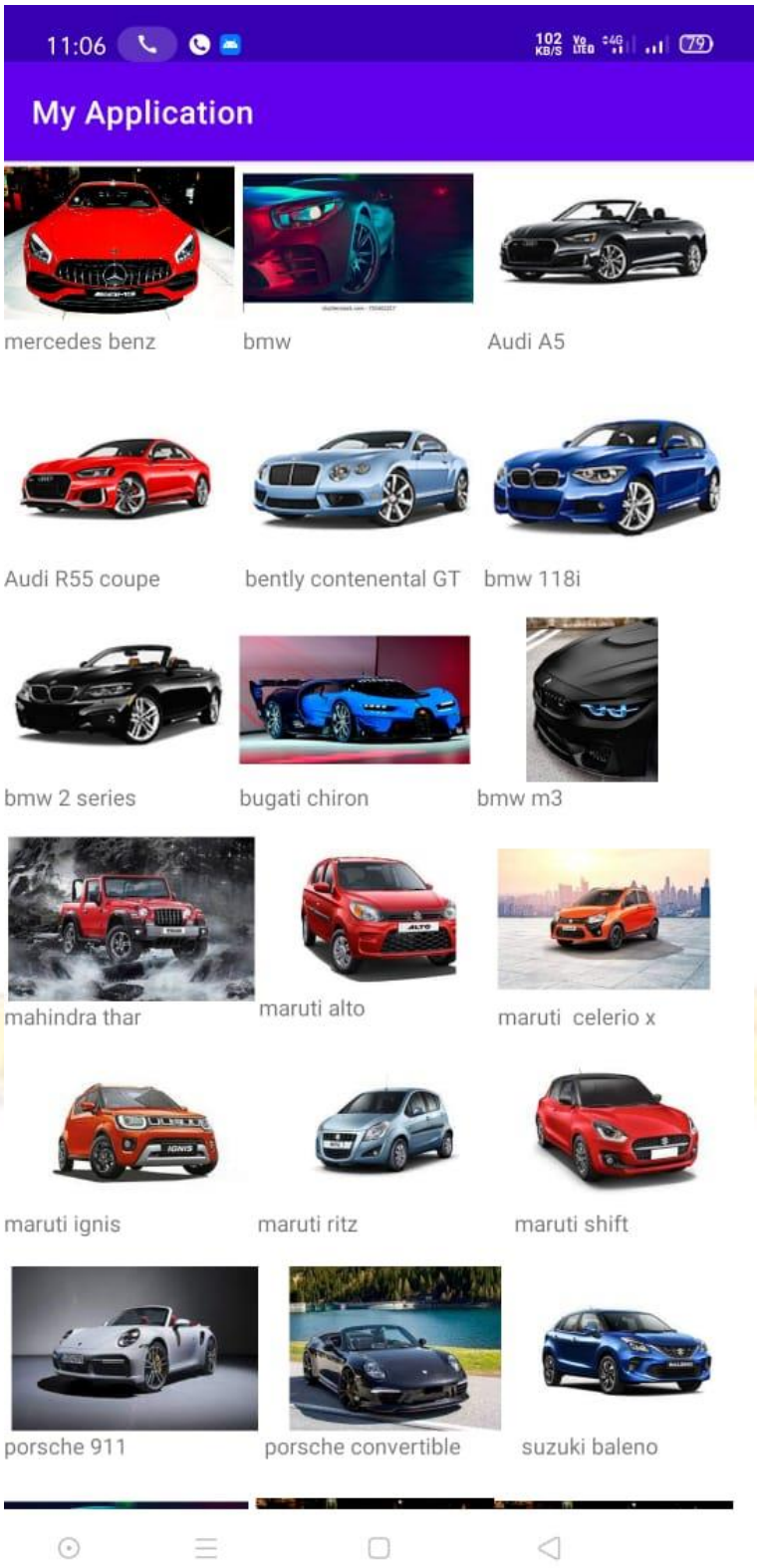
11:06
My Application
mercedes benz
bmw
Audi A5
Audi R55 coupe
bently contenental GT
bmw 118i
bmw 2 series
bugati chiron
bmw m3
mahindra thar
maruti alto
maruti celerio x
maruti ignis
maruti ritz
maruti shift
porsche 911
porsche convertible
suzuki baleno

Fig 2.2

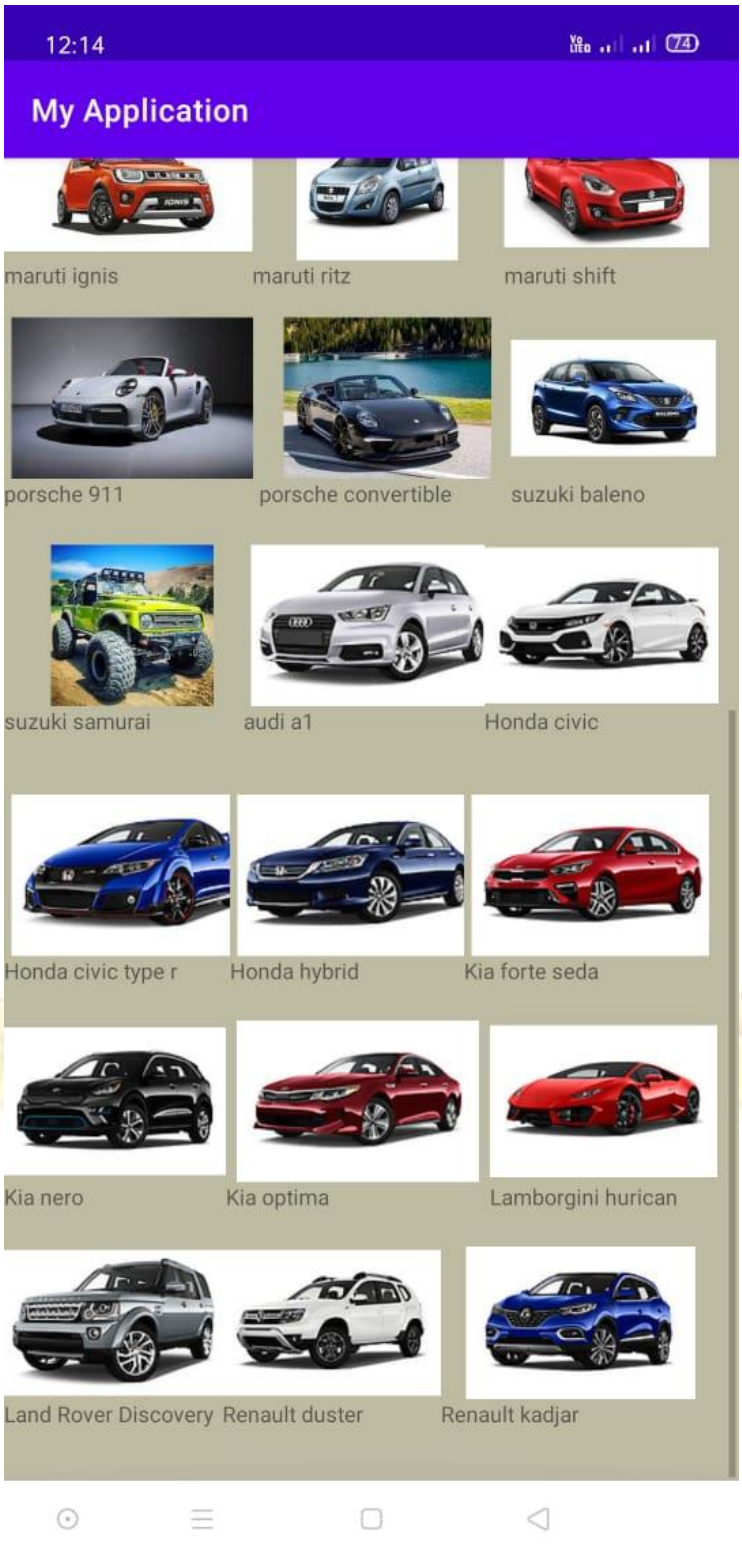
12:14
My Application
maruti ignis
maruti ritz
maruti shift
porsche 911
porsche convertible
suzuki baleno
suzuki samurai
audi a1
Honda civic
Honda civic type r
Honda hybrid
Kia forte seda
Kia nero
Kia optima
Lamborgini hurican
Land Rover Discovery
Renault duster
Renault kadjar

Fig 2.3

Conclusion

Through the development of car magazine app, we got a clear idea about how the online magazine apps are created. By using scrollable object, we can list as many cars in a single layout. It becomes easy to view different cars in a single app.

By adopting Android studio 3.1.2 + Java and XML language as technical support of this system, with the Android plug-in tools, and combination of Latest Android SDK version led to the comprehensive and smoothly design and development of the mobile terminal.

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