A

MICRO PROJECT REPORT

ON

" Mobile Application Development "

SUBMITTED TO THE MSBTE, MUMBAI IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DIPLOMA

Student name: Jadhav Sakshi **Enrollment No:- 2115200044**

Student name: Sutar Rupali **Enrollment No:- 2115200073**

Student name: Rane Isha **Enrollment No:- 2215200253**

Student name: Kharade Shravani **Enrollment No:- 2115200047**

UNDER THE GUIDANCE OF

Mrs. Gawade S.P.

DEPARTMENT OF COMPUTER ENGINEERING

SHARADCHANDRA PAWAR INSTITUTE OF TECHNOLOGY,

SOMESHWARNAGAR TAL:-BARAMATI DIST:-PUNE

DEPARTMENT OF COMPUER ENGINEERING
SHARADCHANDRA PAWAR INSTITUTE OF TECHNOLOGY
SOMESHWARNAGAR
TAL:-BARAMATI DIST:-PUNE
Pin No:-412306

CERTIFICATE

This is to certify that the Project report entitled

"Alarm Clock System"

Submitted by

Student name: Jadhav Sakshi **Enrollment No:- 2115200044**

Student name: Sutar Rupali **Enrollment No:- 2115200073**

Student name: Rane Isha **Enrollment No:- 2215200253**

Student name: Kharade Shravani **Enrollment No:- 2115200047**

Is a bona fide work carried out by them under the supervision of Mrs. Gawade S.P. and it is submitted towards the partial fulfillment of the requirement of MSBTE, Mumbai for the Award of the Diploma of Computer Engineering

Mrs. Gawade S.P. Mrs. Nazirkar S.B.

(Internal Guide) (H.O.D)

Place:- Someshwarnagar Mr. Hajare S.K

(PRINCIPAL)

ACKNOWLEDGEMENT

We express our sincere thanks Mrs. Gawade S.P.Whose supervision, inspiration and valuable discussion has helped us tremendously to complete our project. Her guidance proven to the most valuable to overcome all the hurdles in the fulfillment of this project on

We grateful to Mrs. Nazirkar S. B. Head of COMPUTER Dept. for direct or indirect help in the completion of this project. Last but not least, this acknowledgment would be incomplete without rendering my sincere gratitude to all those who have helped us in the completion of this project.

Yours Sincerely,

Miss. Jadhav Sakshi Mansing

Miss. Sutar Rupali Sopan

Miss. Rane Isha Dilip

Miss. Kharade Shravani Shriram

Evaluation sheet for the Micro Project

Academic Year: 2024-25 **Name of Faculty : Mrs.Gawade S.G.**

Course: Computer **Course Code: CO6-I**

Subject : MAD **Code :22617**

Title of the Project:- Alarm Clock System

Major Learing Outcomes Achived By student by doing

the projects:

(a)Practical Outcomes
1. Develop rich user interfaces by using layouts and control.
2. Publish android application.

Roll No.	*Student Name*	*Mark out of 06 Performance Oral/Presentation (D5 Col.8)*	*Mark out of 04 Performance Oral/Presentation (D5 Col.9)*	*Total Out Of (Marks=10)*	
1	Jadhav Sakshi Mansing				
2	Sutar Rupali Sopan				
3	Rane Isha Dilip				
4	Kharade Shravani Shriram				

(Name and Signature of Faculty)

Micro Project Evaluation Sheet

Name of student : Jadhav Sakshi Mansing **Enrollment No: 2115200044**

Name of Programmer: Computer **Semester: sixth**

Course Title : MAD **Code:22617**

Title of the Micro-project : Alarm Clock System

Sr. No.	Characteristics to be assessed	Poor (Marks 1-3)	Average (Marks (4-5)	Good (Marks 6-8)	Excellent (Marks 9-10)	Sub Total
(K) Process And Product Assessment (Convert above total marks out of 6 marks)						
1	Relevance to the course					
2	Literature Review/ information Collection					
3	Completion of the Target as per project proposal					
4	Analysis of Data and representation					
5	Quality of Prototype/ Model					
6	Report Presentation					
(L) Individual Presentation/Vivo (Convert above total marks out of 4 Marks)						
7	Presentation					
8	Viva					

(A) Process and Product Assessment (6 Marks)	(B) Individual Presentation/Vivo (4 Marks)	Total Marks 10

Comments/Suggestions about team work/leadership/inter-personal communication (if any)……

…….....

Name of the Teacher:- Mrs. Gawade S.P.

Dated signature:-

Micro Project Evaluation Sheet

Name of student : Kharade Shravani Shriram Enrollment No: 2115200047

Name of Programmer: Computer Semester: sixth

Course Title : MAD Code:22617

Title of the Micro-project : Alarm Clock System

Sr. No.	Characteristics to be assessed	Poor (Marks 1-3)	Average (Marks (4-5)	Good (Marks 6-8)	Excellent (Marks 9-10)	Sub Total
(K) Process And Product Assessment (Convert above total marks out of 6 marks)						
1	Relevance to the course					
2	Literature Review/ information Collection					
3	Completion of the Target as per project proposal					
4	Analysis of Data and representation					
5	Quality of Prototype/ Model					
6	Report Presentation					
(L) Individual Presentation/Vivo (Convert above total marks out of 4 Marks)						
7	Presentation					
8	Viva					

(A) Process and Product Assessment (6 Marks)	(B) Individual Presentation/Vivo (4 Marks)	Total Marks 10

Comments/Suggestions about team work/leadership/inter-personal communication (if any)……

…….....

Name of the Teacher:- Mrs. Gawade S.P.

Dated signature:-

Micro Project Evaluation Sheet

Name of student :Sutar Rupali Sopan **Enrollment No :2115200073**

Name of Programmer: Computer **Semester: sixth**

Course Title : MAD **Code:22617**

Title of the Micro-project : Alarm Clock System

Sr. No.	Characteristics to be assessed	Poor (Marks 1-3)	Average (Marks (4-5)	Good (Marks 6-8)	Excellent (Marks 9-10)	Sub Total
(K) Process And Product Assessment (Convert above total marks out of 6 marks)						
1	Relevance to the course					
2	Literature Review/ information Collection					
3	Completion of the Target as per project proposal					
4	Analysis of Data and representation					
5	Quality of Prototype/ Model					
6	Report Presentation					
(L) Individual Presentation/Vivo (Convert above total marks out of 4 Marks)						
7	Presentation					
8	Viva					

(A) Process and Product Assessment (6 Marks)	(B) Individual Presentation/Vivo (4 Marks)	Total Marks 10

Comments/Suggestions about team work/leadership/inter-personal communication (if any)……

Name of the Teacher:- Mrs. Gawade S.P.

Dated signature:-

Micro Project Evaluation Sheet

Name of student :Rane Isha Dilip **Enrollment No : 2215200253**

Name of Programmer: Computer **Semester: Sixth**
Course Title : MAD **Code:22617**

Title of the Micro-project : Alarm Clock System

Sr. No.	Characteristics to be assessed	Poor (Marks 1-3)	Average (Marks (4-5)	Good (Marks 6-8)	Excellent (Marks 9-10)	Sub Total
(K) Process And Product Assessment (Convert above total marks out of 6 marks)						
1	Relevance to the course					
2	Literature Review/ information Collection					
3	Completion of the Target as per project proposal					
4	Analysis of Data and representation					
5	Quality of Prototype/ Model					
6	Report Presentation					
(L) Individual Presentation/Vivo (Convert above total marks out of 4 Marks)						
7	Presentation					
8	Viva					

(A) Process and Product Assessment (6 Marks)	(B) Individual Presentation/Vivo (4 Marks)	Total Marks 10

Comments/Suggestions about team work/leadership/inter-personal

communication (if any)……

Name of the Teacher:- Mrs. Gawade S.P.

Dated signature:-

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Abstract:-

clocks are a common fixture in almost all houses and it plays a vital role in determining a person's state of mind for the rest of the day. The Smart Alarm is a fully integrated alarm clock that will help the user to wake up in the morning with lights that gradually increase in brightness and the user’s favorite music or a default beeping tone when the brightness has reached its maximum. There is an additional feature that generates a tantalizing coffee aroma for waking up the person in a relatively pleasant environment. Weather forecast and reminders will also be displayed in the clock. The sunrise simulation, aroma generation, weather forecast and news display will be done using Arduino Uno R3.

Introduction:-

At this time most peoples in the whole world use an automated digital clock in their everyday use. Starting from the hand watch we were to those huge street clocks every one of us are dependent on the display the make. In 21th century time being more than money, regarding this change our hobbies of checking our time every minute is dramatically increasing. About 99% of today's digital clocks are made using microcontrollers which make them more hand able from the rest, those we can set the time to start any minute or second we want and also set an alarm for reminder so that the system will store the value in a memory and then when the time reaches the alarm will be on. As the microcontroller consists almost all the logical devices external logic gates doesn't exist.

In order to be used properly and for a long life usage digital clocks must cover a very small place as much as it could but the size of most of the digital clocks manufactured this time is unexpectedly increasing as the use the give increases. This are the list of problems that exists in today's digital clocks

- An extensive range of large.
- Use of independent LED matrix digital wall for the display that takes a huge space in the circuit and a lot of matrix code in the controller.
- Displays only hour and minute. This makes the use they give us limited on the range given.
- Not easy to maintain. When the clock gets damaged some can't tell where the problem is easily, on the microcontroller or on the other driver ICS.
- Very costly.

Advantages:-

- Maintain accurate time
- Low energy consumption
- Enables time stamped data
- Support scheduled tasks

Source Code:-

activity_main.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:orientation="vertical"
   android:gravity="center_vertical"
   android:background="@drawable/alarm"
   tools:context=".MainActivity">

   <TextView
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Select \nTime"
      android:id="@+id/selectTime"
      android:textSize="40sp"
      android:layout_marginTop="280dp"
      android:layout_gravity="center_horizontal"
      android:textColor="@color/white"
      android:textAlignment="center"/>

   <RelativeLayout
      android:layout_width="match_parent"
      android:layout_height="wrap_content">

      <Button
         android:layout_width="150dp"
         android:layout_height="wrap_content"
         android:id="@+id/setAlarm"
         android:text="Set \nAlarm"
         android:textSize="20sp"
         android:padding="8dp"
         android:layout_marginStart="40dp"
         android:layout_marginTop="250dp"/>

      <Button
         android:layout_width="150dp"
```

```
        android:layout_height="wrap_content"
        android:id="@+id/cancelAlarm"
        android:text="Cancel \nAlarm"
        android:textSize="20sp"
        android:padding="8dp"
        android:layout_alignParentEnd="true"
        android:layout_marginTop="250dp"
        android:layout_marginEnd="40dp"/>

    </RelativeLayout>

</LinearLayout>
```

MainActivity.java

```
package com.example.alarmmanager;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.app.AlarmManager;
import android.app.NotificationChannel;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.os.Build;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;
import
com.example.alarmmanager.databinding.ActivityMai
nBinding;
import
com.google.android.material.timepicker.MaterialTim
ePicker;
import
com.google.android.material.timepicker.TimeFormat;
import java.util.Calendar;
public class MainActivity extends
AppCompatActivity {
    private ActivityMainBinding binding;
    private MaterialTimePicker timePicker;
    private Calendar calendar;
    private AlarmManager alarmManager;
    private PendingIntent pendingIntent;
    @Override
```

```
   protected void onCreate(Bundle
savedInstanceState) {
       super.onCreate(savedInstanceState);
       binding =
ActivityMainBinding.inflate(getLayoutInflater());
       setContentView(binding.getRoot());
       createNotificationChannel();
       binding.selectTime.setOnClickListener(new
View.OnClickListener() {
           @Override
           public void onClick(View view) {
              timePicker = new
MaterialTimePicker.Builder()

.setTimeFormat(TimeFormat.CLOCK_12H)
                    .setHour(12)
                    .setMinute(0)
                    .setTitleText("Select Alarm Time")
                    .build();

timePicker.show(getSupportFragmentManager(),
"androidknowledge");

timePicker.addOnPositiveButtonClickListener(new
View.OnClickListener() {
                @Override
                public void onClick(View view) {
                   if (timePicker.getHour() > 12){
                      binding.selectTime.setText(

String.format("%02d",(timePicker.getHour()-12))
+":"+ String.format("%02d",
timePicker.getMinute())+"PM"
                      );
                   } else  {

binding.selectTime.setText(timePicker.getHour()+":"
+ timePicker.getMinute()+ "AM");
                   }
                   calendar = Calendar.getInstance();

calendar.set(Calendar.HOUR_OF_DAY,
timePicker.getHour());
                   calendar.set(Calendar.MINUTE,
timePicker.getMinute());
                   calendar.set(Calendar.SECOND, 0);

calendar.set(Calendar.MILLISECOND, 0);
```

```
                }
            });
        }
    });
    binding.setAlarm.setOnClickListener(new
View.OnClickListener() {
        @SuppressLint("UnspecifiedImmutableFlag")
        @Override
        public void onClick(View view) {
            alarmManager = (AlarmManager)
getSystemService(Context.ALARM_SERVICE);
            Intent intent = new
Intent(MainActivity.this, AlarmReceiver.class);
            pendingIntent =
PendingIntent.getBroadcast(MainActivity.this, 0,
intent, 0);

alarmManager.setInexactRepeating(AlarmManager.R
TC_WAKEUP, calendar.getTimeInMillis(),
AlarmManager.INTERVAL_DAY, pendingIntent);
            Toast.makeText(MainActivity.this, "Alarm
Set", Toast.LENGTH_SHORT).show();
        }
    });
    binding.cancelAlarm.setOnClickListener(new
View.OnClickListener() {
        @SuppressLint("UnspecifiedImmutableFlag")
        @Override
        public void onClick(View view) {
            Intent intent = new
Intent(MainActivity.this, AlarmReceiver.class);
            pendingIntent =
PendingIntent.getBroadcast(MainActivity.this, 0,
intent, 0);
            if (alarmManager == null){
                alarmManager = (AlarmManager)
getSystemService(Context.ALARM_SERVICE);
            }
            alarmManager.cancel(pendingIntent);
            Toast.makeText(MainActivity.this, "Alarm
Canceled", Toast.LENGTH_SHORT).show();
        }
    });
  }
  private void createNotificationChannel(){
    if (Build.VERSION.SDK_INT >=
Build.VERSION_CODES.O){
```

```
            CharSequence name = "akchannel";
            String desc = "Channel for Alarm Manager";
            int imp =
NotificationManager.IMPORTANCE_HIGH;
            NotificationChannel channel = new
NotificationChannel("androidknowledge", name,
imp);
            channel.setDescription(desc);
            NotificationManager notificationManager =
getSystemService(NotificationManager.class);

notificationManager.createNotificationChannel(chann
el);
        }
    }
}
```

activity_notifications.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout

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"
    tools:context=".activity_notifications">

    <pl.droidsonroids.gif.GifImageView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/gm"
        tools:ignore="MissingConstraints" />
    <Button
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:id="@+id/songbtn"
        android:text="Set \nAlarm"
        android:textSize="20sp"
        android:padding="8dp"
        android:layout_marginStart="40dp"
        android:layout_marginTop="250dp"
        tools:ignore="MissingConstraints" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout
>
```

activity_notifications.java

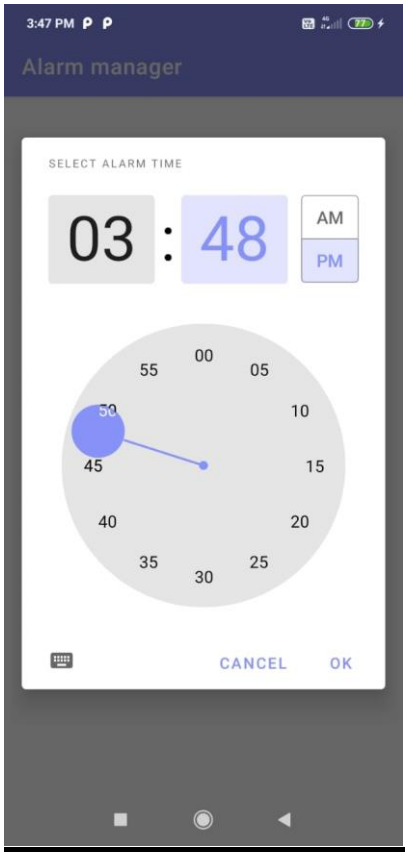
```
package com.example.alarmmanager;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class activity_notifications extends
AppCompatActivity {

Button button;
MediaPlayer mediaPlayer;
   @SuppressLint("MissingInflatedId")
   @Override
   protected void onCreate(Bundle
savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_notifications);
      button=findViewById(R.id.songbtn);
      button.setOnClickListener(new
View.OnClickListener() {
         @Override
         public void onClick(View v) {
            playMusic();
         }
      });

   }
   private void playMusic()
   {

mediaPlayer=MediaPlayer.create(activity_notificatio
ns.this,R.raw.song);
      mediaPlayer.start();
   }
}
```

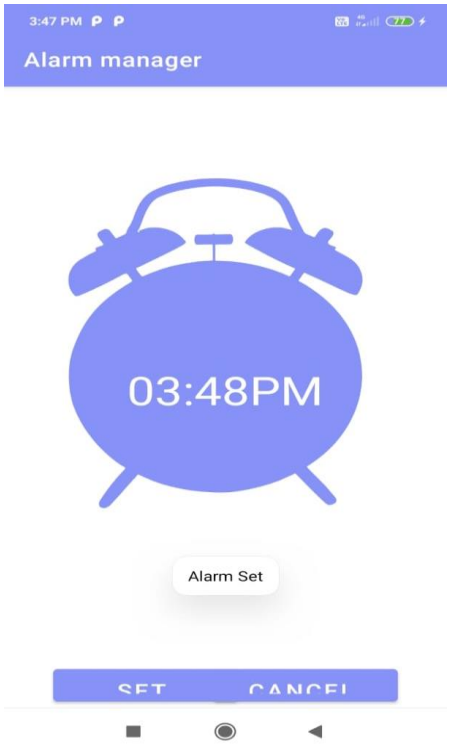
AlarmReceiver.java

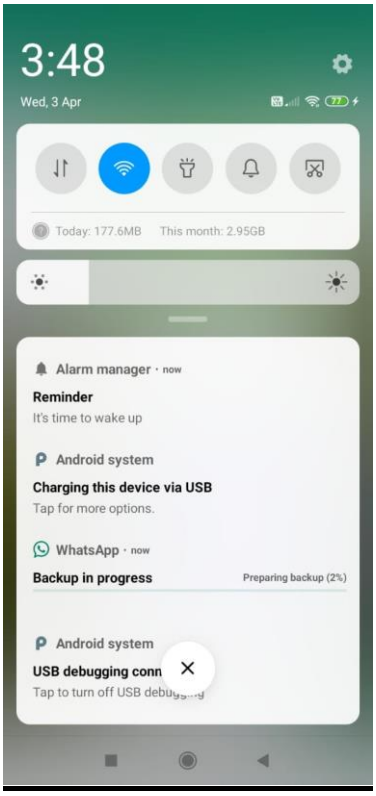
```
package com.example.alarmmanager;


import android.annotation.SuppressLint;
import android.app.PendingIntent;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.media.MediaPlayer;

import androidx.core.app.NotificationCompat;
import
androidx.core.app.NotificationManagerCompat;

public class AlarmReceiver extends
BroadcastReceiver {
   MediaPlayer mediaPlayer;
   private Context AlarmReceiver;

   @SuppressLint("MissingPermission")
   @Override

   public void onReceive(Context context, Intent
intent) {
      Intent nextActivity = new Intent(context,
activity_notifications.class);

intent.setFlags(Intent.FLAG_ACTIVITY_NEW_TA
SK | Intent.FLAG_ACTIVITY_CLEAR_TASK);
      PendingIntent pendingIntent =
PendingIntent.getActivity(context, 0, nextActivity,
PendingIntent.FLAG_IMMUTABLE);
      NotificationCompat.Builder builder = new
NotificationCompat.Builder(context,
"androidknowledge")

.setSmallIcon(R.drawable.baseline_notifications_24)
            .setContentTitle("Reminder")
            .setContentText("It's time to wake up")
            .setAutoCancel(true)

.setDefaults(NotificationCompat.DEFAULT_ALL)

.setPriority(NotificationCompat.PRIORITY_HIGH)
            .setContentIntent(pendingIntent);
```

```
        NotificationManagerCompat
notificationManagerCompat =
NotificationManagerCompat.from(context);

notificationManagerCompat.notify(123,builder.build(
));
        playMusic();

    }
    private void playMusic()
    {

mediaPlayer=MediaPlayer.create(AlarmReceiver,R.r
aw.song);
        mediaPlayer.start();
    }
}
```

OUTPUT:-


3:47 PM
Alarm manager
SELECT ALARM TIME
03
:
48
AM
PM
00
05
10
15
20
25
30
35
40
45
50
55
CANCEL
OK


3:47 PM
Alarm manager
03:48PM
Alarm Set
SET
CANCEL


3:48
Wed, 3 Apr
Today: 177.6MB This month: 2.95GB
Alarm manager · now
Reminder
It's time to wake up
Android system
Charging this device via USB
Tap for more options.
WhatsApp · now
Backup in progress
Preparing backup (2%)
Android system
USB debugging conn
Tap to turn off USB debu


3:49 PM
Alarm manager
SET ALARM
GOOD MORNING
#SuperBOOMi

Conclusion

Smart Security Alarm Systems have allowed this need to become a reality. Alarm systems have evolved over the past decade to become integrated systems that leverage technology to secure your home from intruders, as well as dangers that lie within the house, like gas leaks.

Smart alarm system provides numerous benefits in addition to safeguarding the house. It gives the flexibility and convenience of operating the alarm system and all connected smart gadgets from the palm of your hand and any location around the world. We have many such use cases demonstrate the utility of smart home alarm systems.

References

- https://www.discreet.co.in/real-applications-of-smart-security-alarm-systems/
- https://studytronics.weebly.com/uploads/4/4/3/7/44372217/home_security_alarm_system_using_arduino_project_report