OOM PROJECT: DIGITAL CLOCK

PRESENTED TO :-

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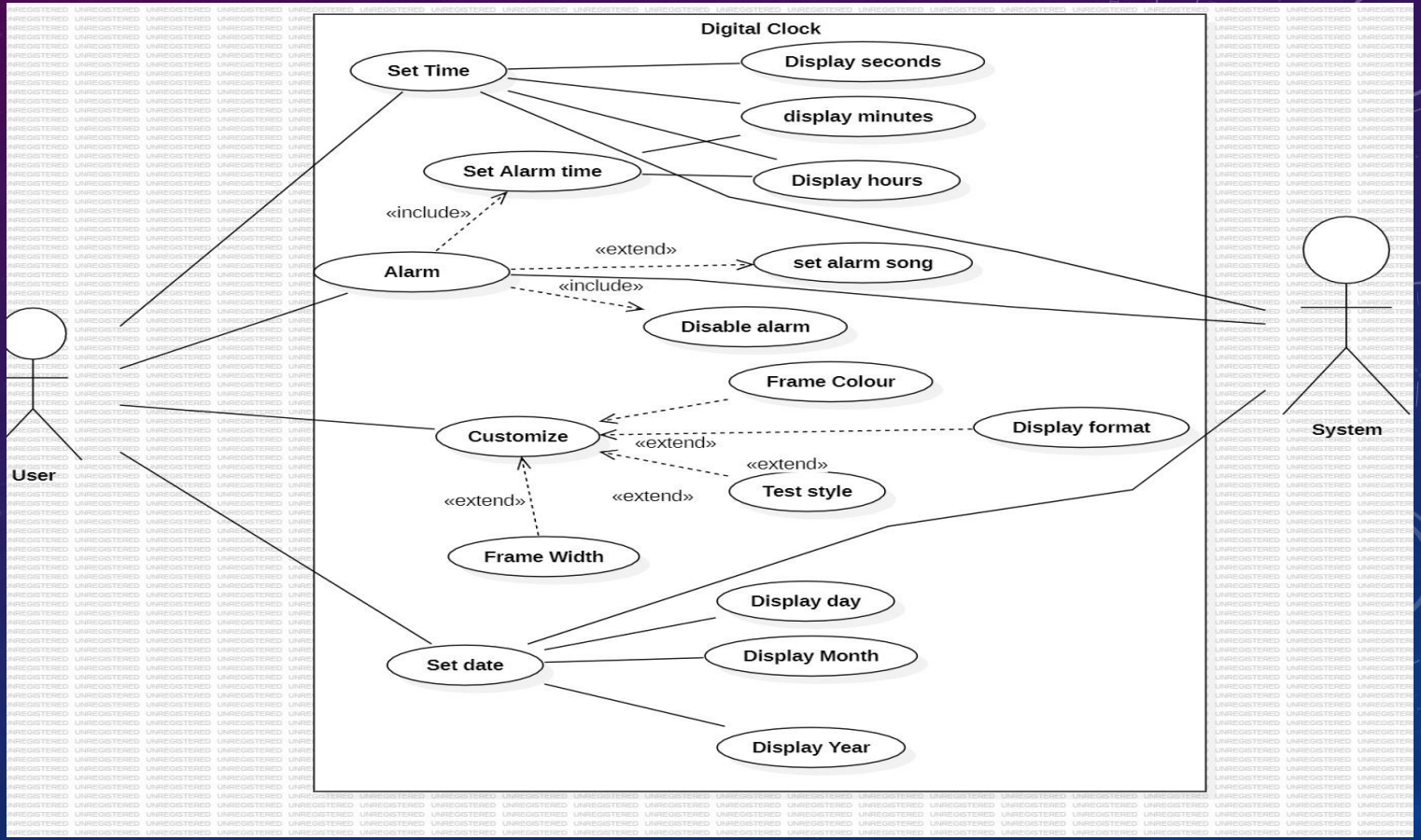
TECHNOLOGIES USED :

Java swing,IntelliJ IDE,

PROJECT DESCRIPTION:

Our Digital clock has various features like it displays time and date. It has options for time zones. It also works as an alarm clock and also gives us a wakeup alarm. It has features of timer ,stopwatch and we can also set 12/24 hr format when we want.

USE CASE DIAGRAM



USER INTERACTS WITH METHOD ALARM WHILE SYSTEM INTERACTS WITH ALARM AND DISPLAY DATE AND TIME.

ALARM: INCLUDES SELECT ALARM TIME AND STOP ALARM AND EXTENDS SETTING OF ALARM SONG .

SELECT ALARM TIME : ALLOWS THE USER TO SELECT THE TIME AT WHICH ALARM SHOULD START. SYSTEM SETS THE ALARM AT THAT TIME (AFTER TAKING REQUIRED INPUTS).

DISPLAY DATE AND TIME: SYSTEM DISPLAYS IST TIME AND DATE AND WE CAN CHANGE TO OTHER TIME ZONES ALSO.

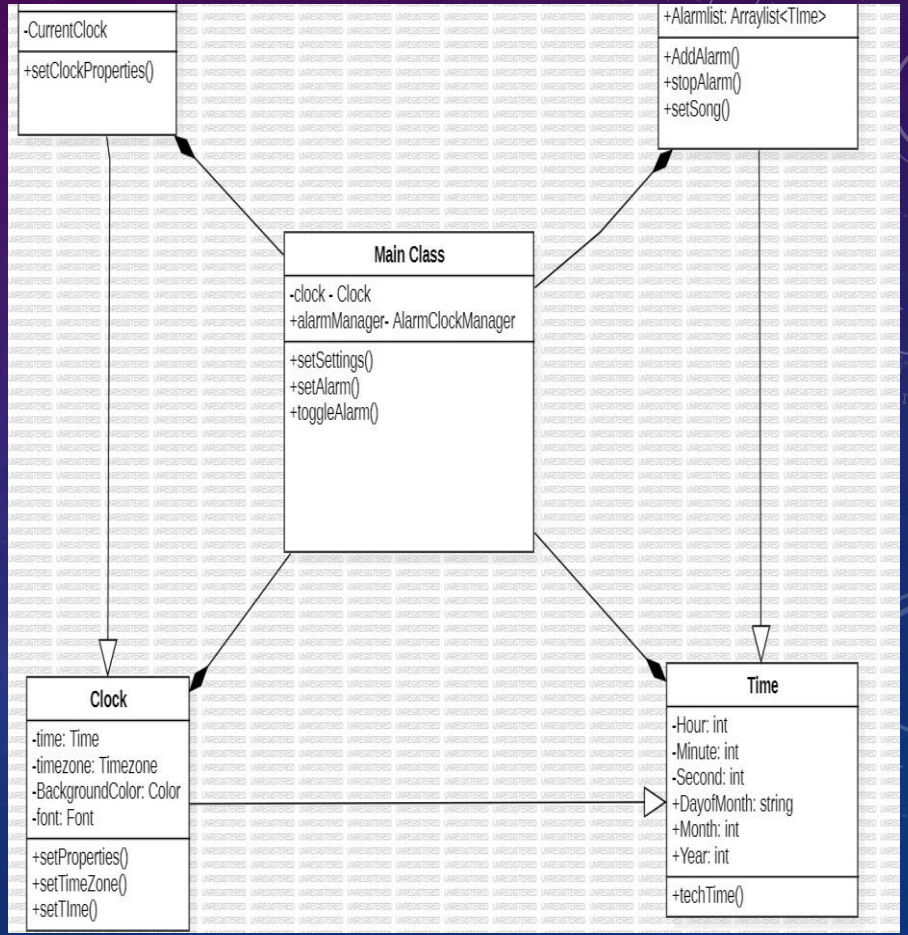
STOP ALARM ALLOWS USER TO STOP THE ALARM BY CLICKING ON THE DISPLAYED BUTTON. SYSTEM STOPS THE ALARMSONG ONCE THE BUTTON IS CLICKED.

SET TIMER ALLOWS US TO SET A CERTAIN TIME PERIOD OF TIME TO MEASURE TIME ELAPSED OR EXTERNAL EVENTS OCCURRING FOR A SPECIFIC TIME INTERVAL.

STOP WATCH ALLOWS US TO MEASURE THE ELAPSED TIME ,WHICH ARE OFTEN USED IN SPORTS AND OTHER ATHLETIC EVENTS.

SETTINGS ALLOWS US TO CHANGE VARIOUS CUSTOMS AND FONTS

CLASS DIAGRAM



MEMBER ACCESS MODIFIERS

ALL CLASSES HAVE DIFFERENT ACCESS LEVELS DEPENDING ON THE ACCESS MODIFIER (VISIBILITY). HERE ARE THE ACCESS LEVELS WITH THEIR CORRESPONDING SYMBOLS:

- PUBLIC (+)
- PRIVATE (-)
- PROTECTED (#)

ADDITIONAL CLASS DIAGRAM COMPONENTS

- CLASSES: A TEMPLATE FOR CREATING OBJECTS AND IMPLEMENTING BEHAVIOR IN A SYSTEM. IN UML, A CLASS REPRESENTS AN OBJECT OR A SET OF OBJECTS THAT SHARE A COMMON STRUCTURE AND BEHAVIOR. THEY'RE REPRESENTED BY A RECTANGLE THAT INCLUDES ROWS OF THE CLASS NAME, ITS ATTRIBUTES, AND ITS OPERATIONS.

- NAME: THE FIRST ROW IN A CLASS IS THE NAME OF THE CLASS.
  - ATTRIBUTES: THE SECOND ROW IN A CLASS SHAPE. EACH ATTRIBUTE OF THE CLASS IS DISPLAYED ON A SEPARATE LINE.
  - METHODS: THE THIRD ROW IN A CLASS SHAPE.METHODS ARE DISPLAYED IN LIST FORMAT WITH EACH OPERATION ON ITS OWN LINE.

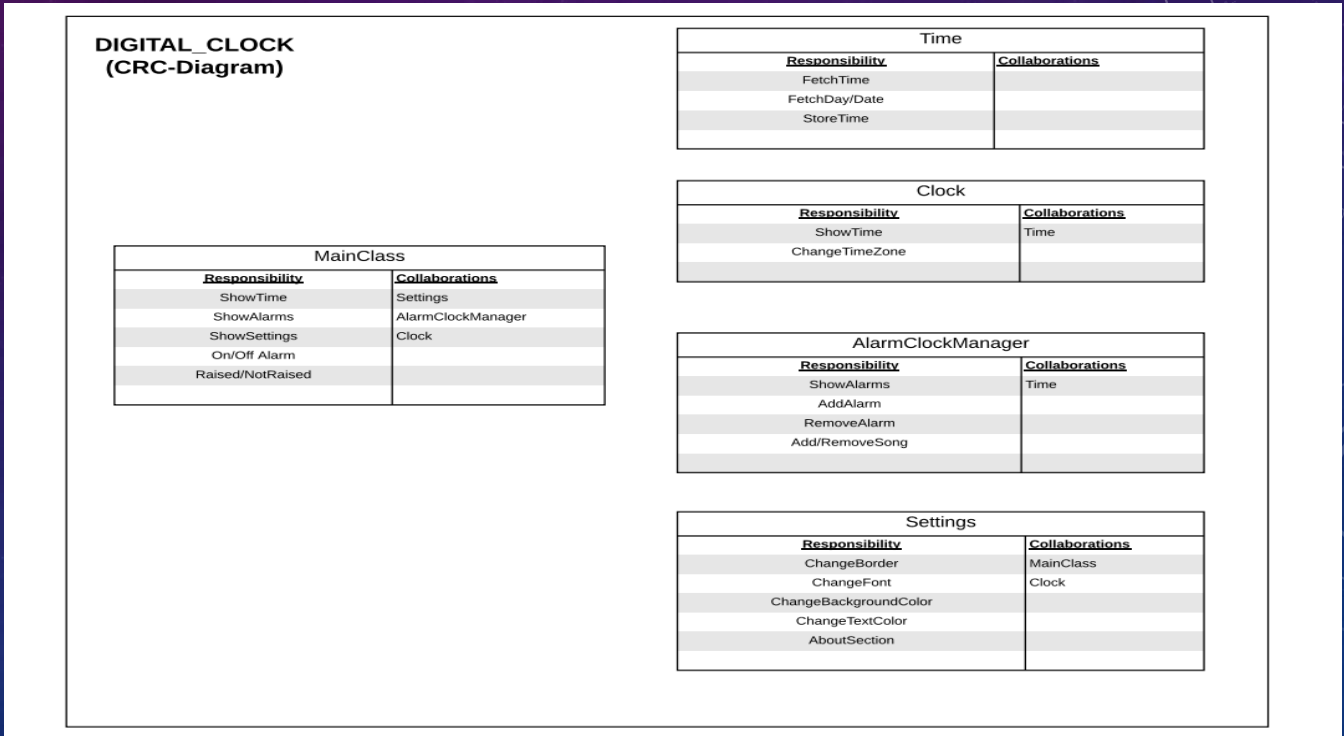
VARIOUS FEATURES OF OUR CLOCK :

1. 12 /24 HOUR DISPLAY TIME FUNCTIONALITY : THIS FEATURE ALLOWS OUR DIGITAL CLOCK TO DISPLAY THE TIME IN 24 HOUR FORMAT OR 12 HOUR FORMAT ACCORDING TO THE CHOICE OF THE USER.

1. SELECT TIMEZONE: THIS FEATURE ALLOWS OUR DIGITAL CLOCK TO SELECT THE TIMEZONE IN OUR DIGITAL CLOCK .

1. CUSTOMIZE : WE CAN CUSTOMIZE THE BORDER,BACKGROUND COLOR AND FONT STYLE USED IN OUR DIGITAL CLOCK.

CRC DIAGRAM



DIGITAL_CLOCK
(CRC-Diagram)

MainClass	
Responsibility	**Collaborations**
ShowTime	Settings
ShowAlarms	AlarmClockManager
ShowSettings	Clock
On/Off Alarm	
Raised/NotRaised	

Time	
Responsibility	**Collaborations**
FetchTime	
FetchDay/Date	
StoreTime	

Clock	
Responsibility	**Collaborations**
ShowTime	Time
ChangeTimeZone	

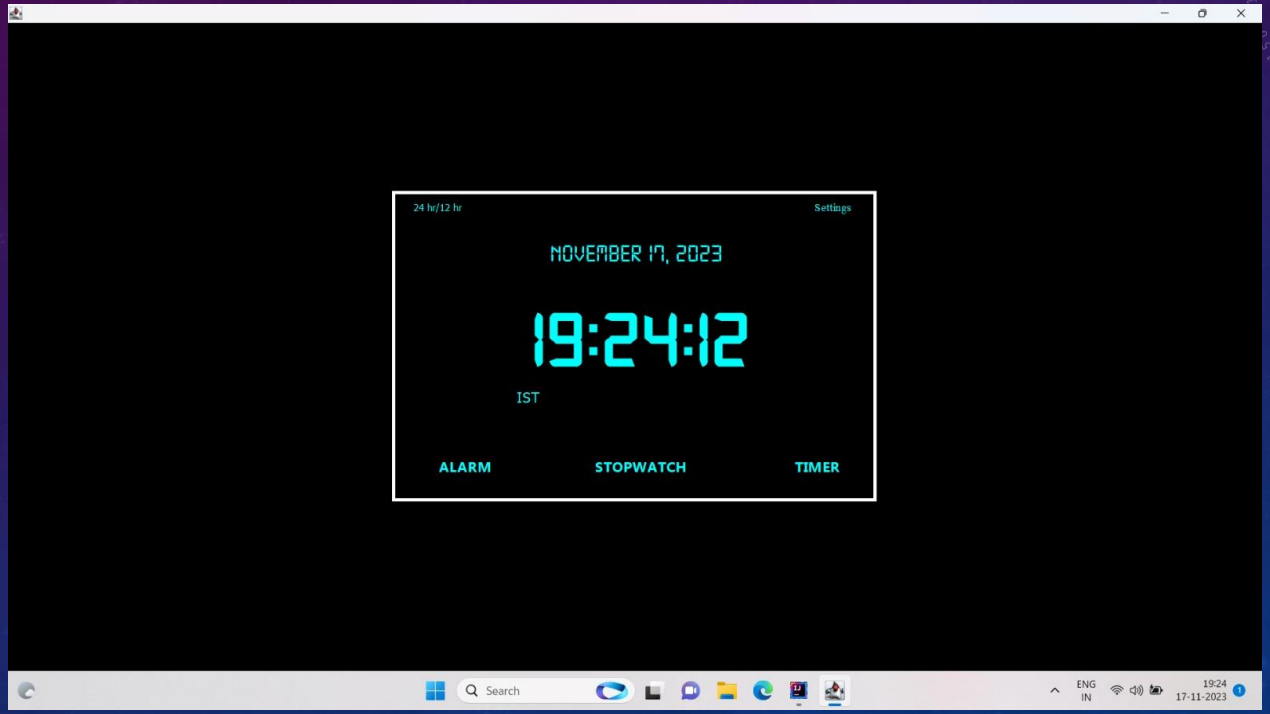
AlarmClockManager	
Responsibility	**Collaborations**
ShowAlarms	Time
AddAlarm	
RemoveAlarm	
Add/RemoveSong	

Settings	
Responsibility	**Collaborations**
ChangeBorder	MainClass
ChangeFont	Clock
ChangeBackgroundColor	
ChangeTextColor	
AboutSection	

ADVANTAGES

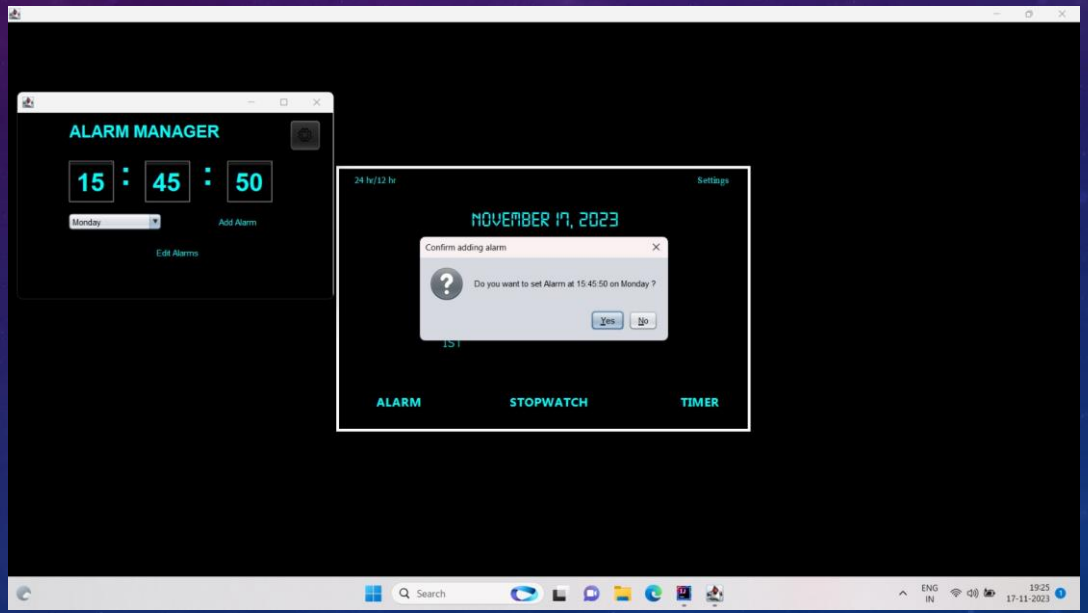
1. WE HAVE USED THREADS IN CODE DUE TO WHICH WE CAN DISPLAY DATE AND TIME PARALLELY.
2. OUR CODE IS SCALABLE I.E WE CAN ADD MANY MORE FUNCTIONALITIES TO IMPROVE OUR CLOCK EASILY.
3. OUR CODE IS MODULAR , EFFICIENT AND HAS LOW COMPLEXITY.

SCREENSHOT OF OUR CLOCK



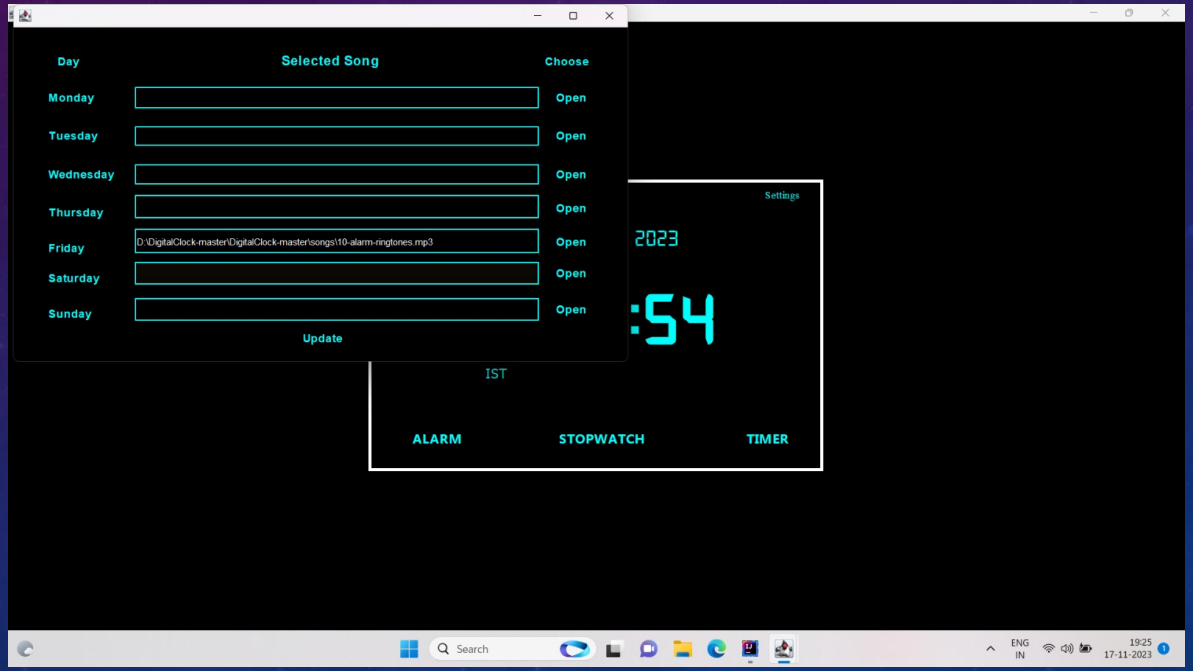
SET ALARM TIME:

We can select alarm time through separate dropboxes for setting the required time



SELECT RINGTONE:

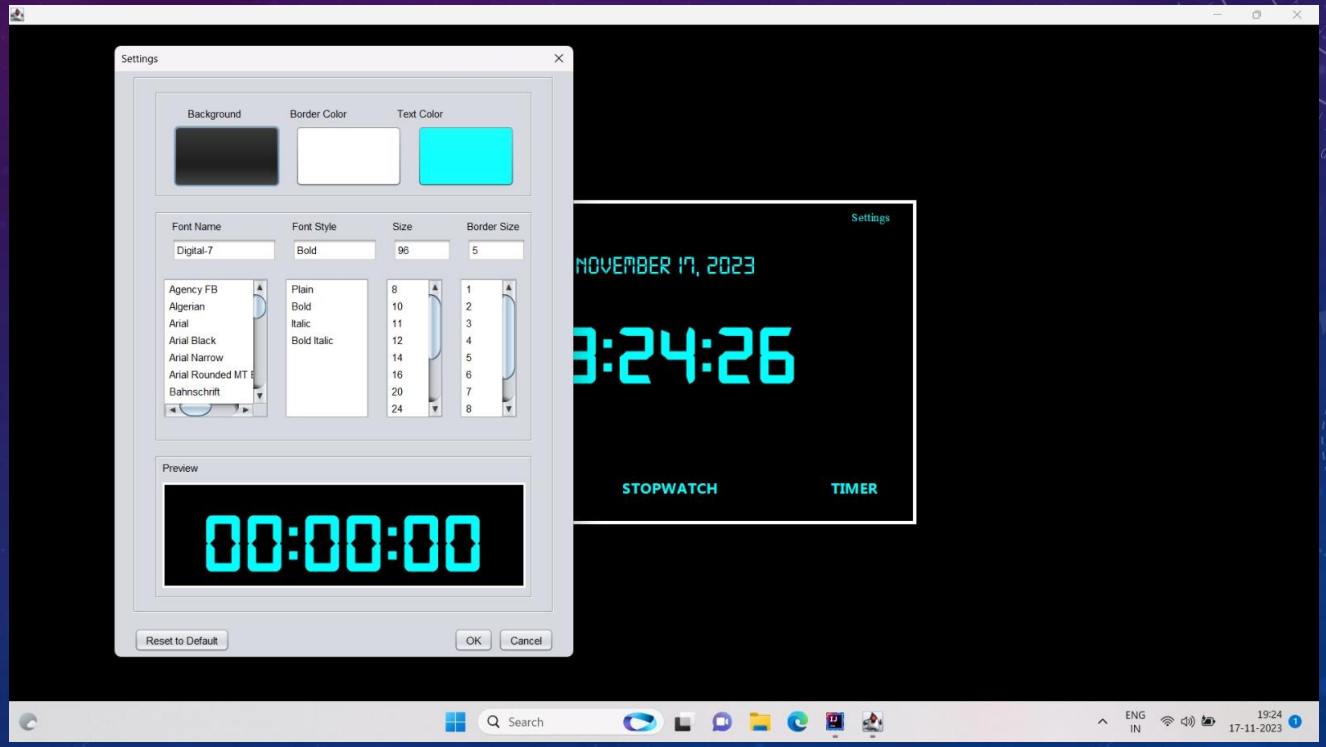
User can select song from his saved files



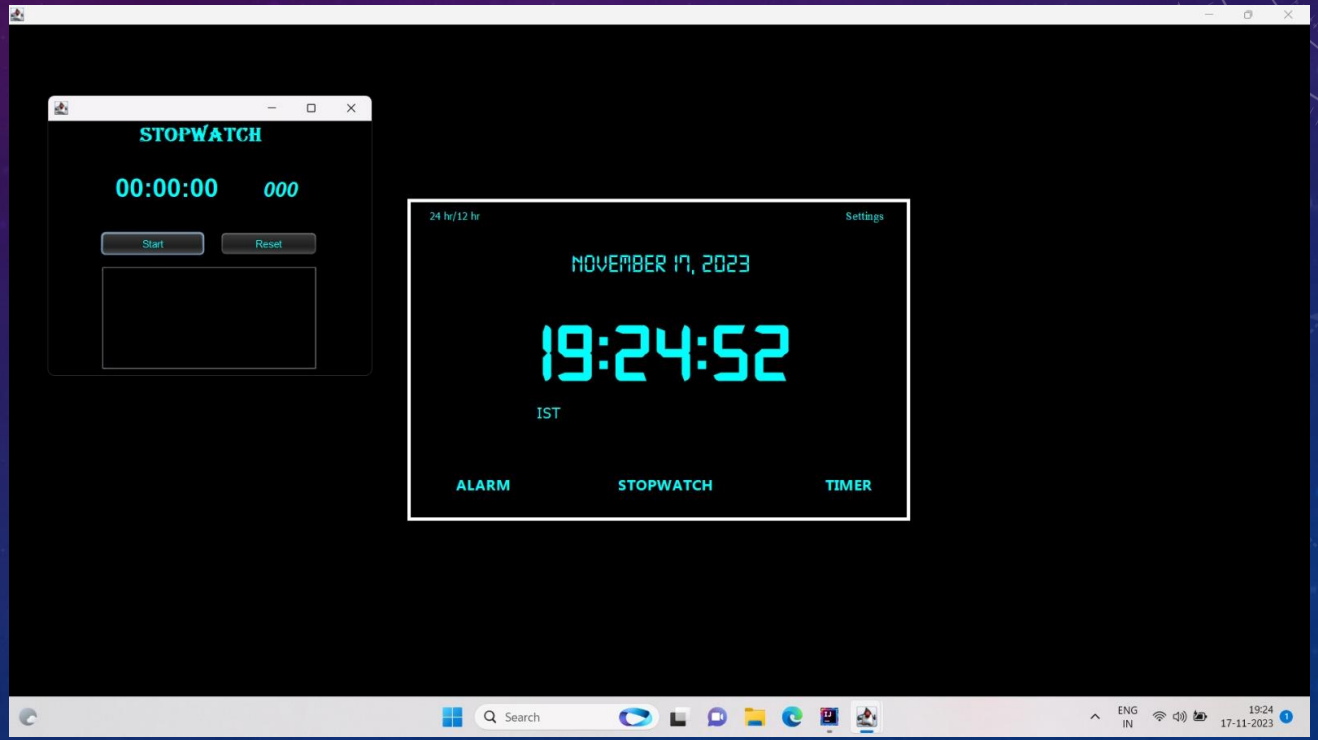
TIMER FEATURE:

We can have a timer for the required time like this

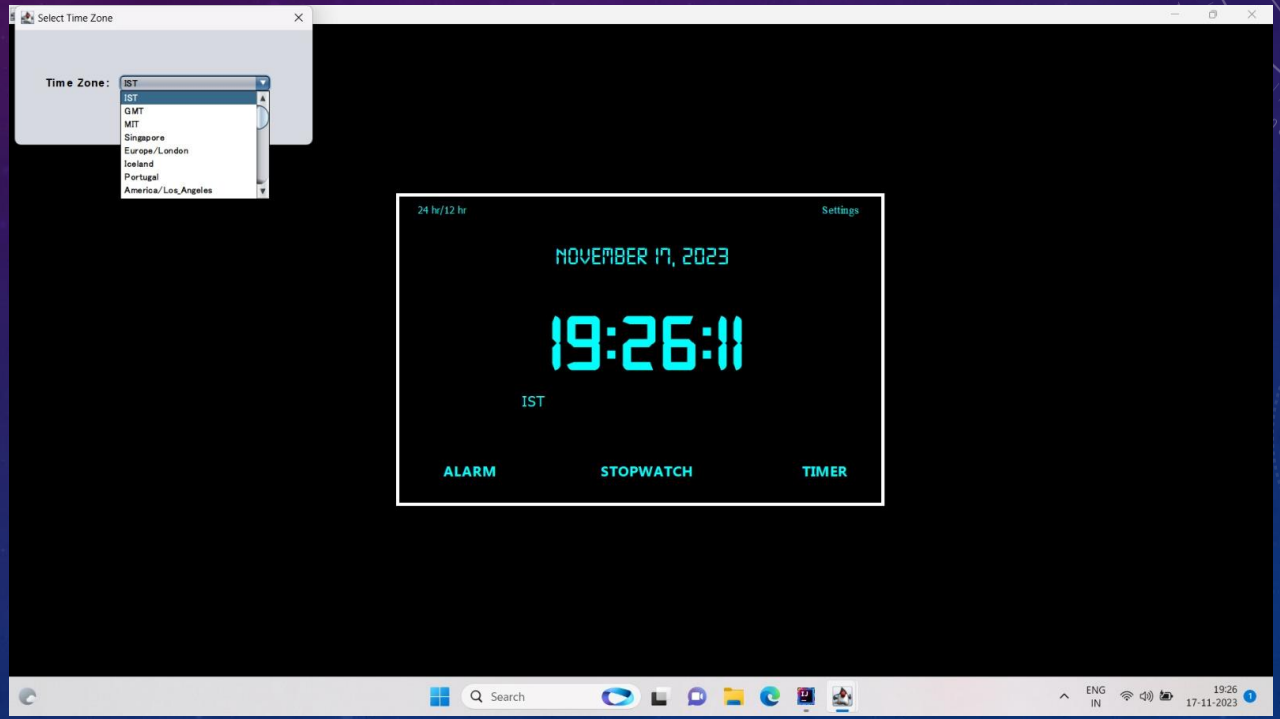
FOR BEAUTIFUL CUSTOMS:



STOP WATCH:


STOPWATCH
00:00:00
000
Start
Reset
24 hr/12 hr
Settings
NOVEMBER 17, 2023
19:24:52
IST
ALARM
STOPWATCH
TIMER
Search
ENG
IN
19:24
17-11-2023

FOR VARIOUS TIME ZONES



THANK YOU