MiNi Project Group Number 15

Title : Digital Alarm clock

Group members :

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What is Digital Alarm Clock ?

A **digital clock** is a type of clock that displays the time digitally (i.e. in numerals or other symbols), as opposed to an analog clock, where the time is indicated by the positions of rotating hands.

When an alarm is attached with the digital clock it is called as Digital Alarm clock. (:P)

Utilities:

1. Display time(which is going as bad as it can).
2. When after the late night work, we sleep in the morning just before the class, it comes for our rescue and wakes us from our nightmares.

What we have done ?

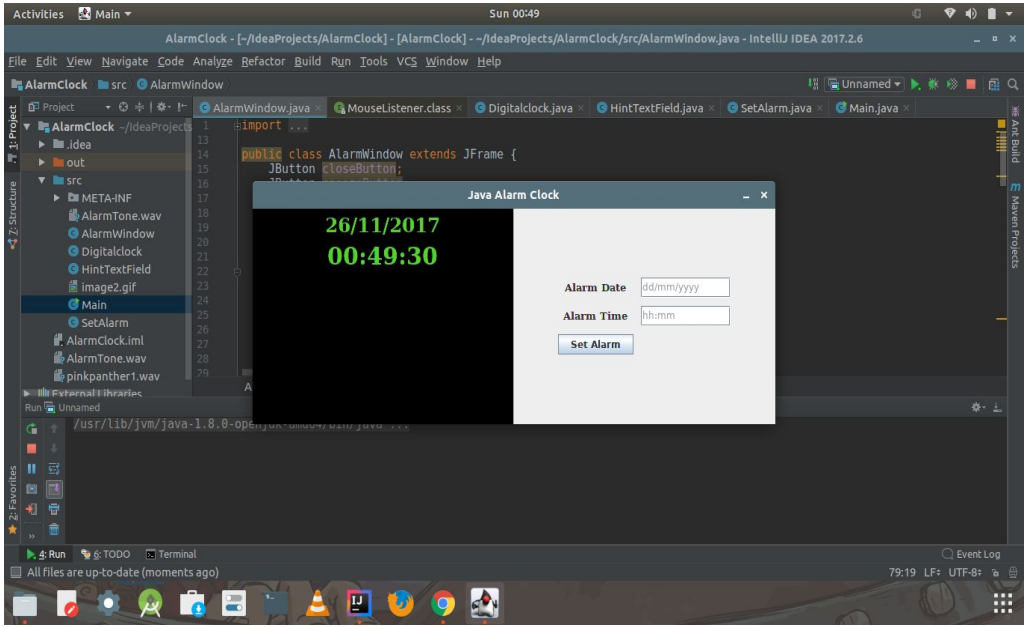
From the null space of knowledge of GUI, we tried to push our brain to the interesting world of GUI.

We started searching internet and books to start from the very basic of inserting buttons, to the advanced(that’s what it seemed to us) making digital clock and inserting alarm feature to it.

In next few pages we have tried to showcase our great work.

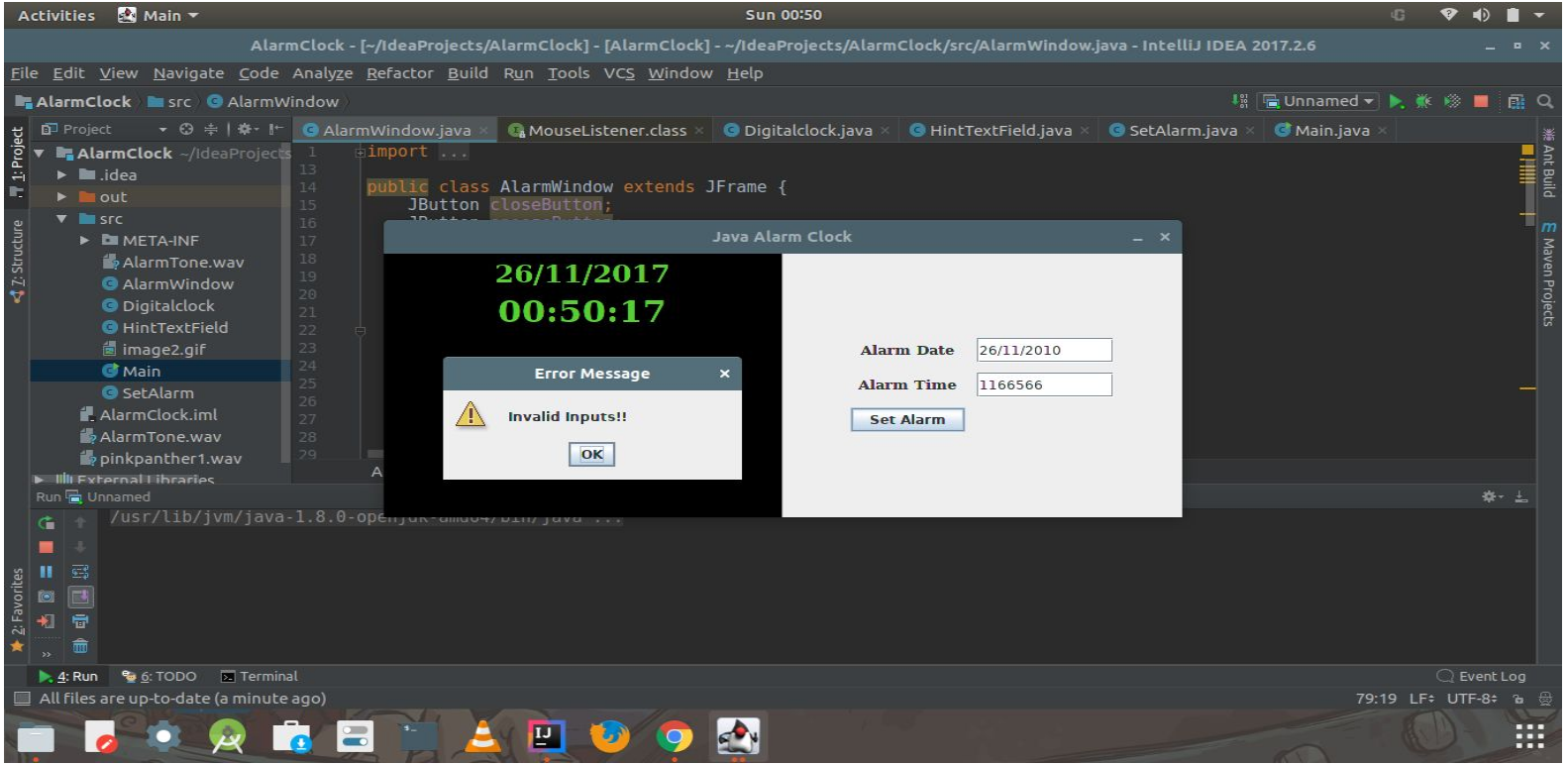
Front End

- The window to which the user interacts is Front End.
- The image shown here depicts the front end of our beautiful project, Digital Alarm Clock.
- The time shown on the left is the current time.
- Date shown is the present day's date.
- Alarm Date is the date at which you want to set the alarm.
- Alarm Time is to set the time at which you want to be kicked out of your dreams or to remind of your current situation.
- Set Alarm Button is to set the alarm finally.



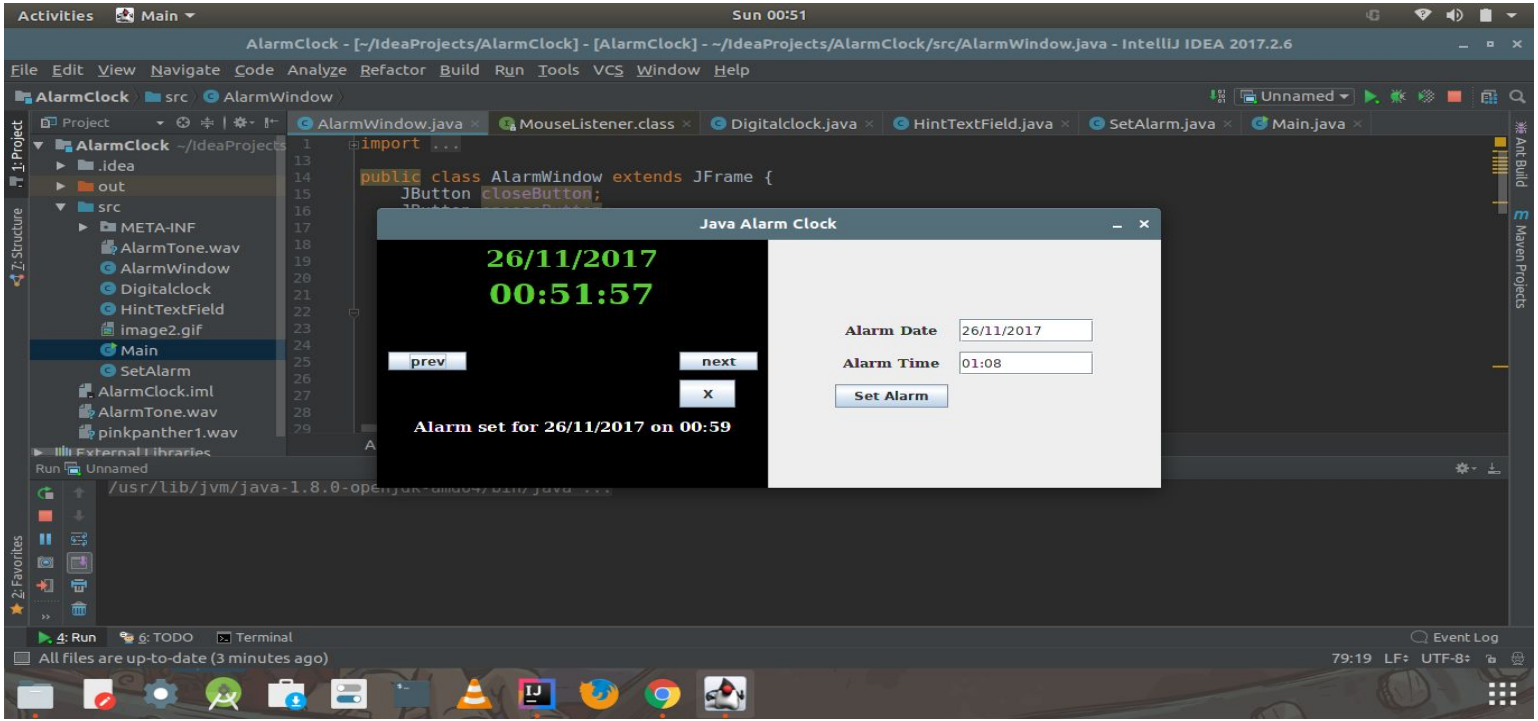
Front End (continued….)

- When you have crossed all your limits something will surely be there to warn you.
- Same goes here when you will put the date or time that is out of constraints, or not in the valid format depicted in the Text fields. Then a window will pop up showing Invalid Inputs.



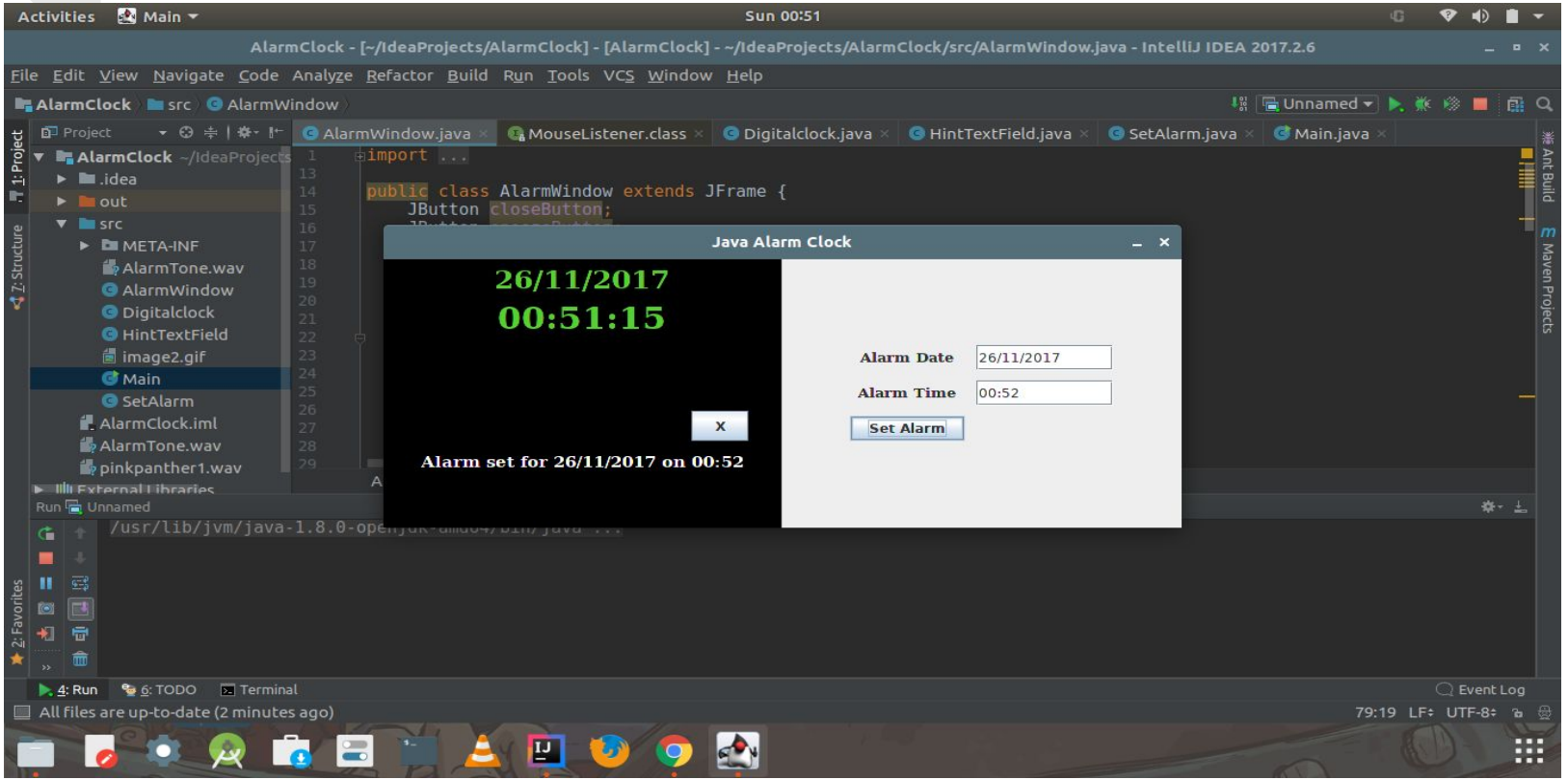
Front End (Continued….)

- When you have set multiple alarms, then you have the option of viewing your previous alarms.
- You get the chance to cancel any of the alarms you have set by going to that alarm and pressing “X” Button.



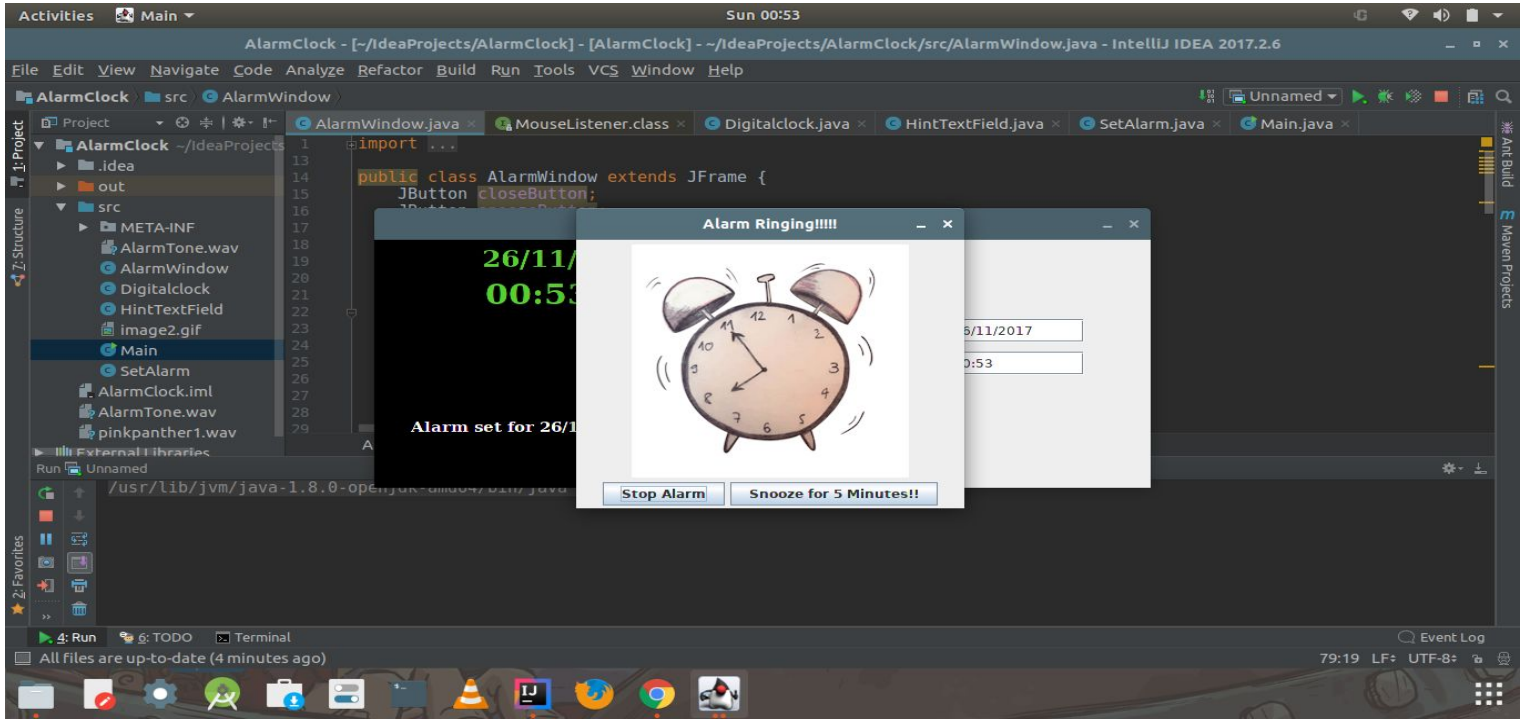
Frontend (Continued....)

- When finally your alarm is set, there is a label showing the Alarm set with the entered date and time.
- There is also a button to reverse your decision and getting the alarm cancelled. (The X Button).



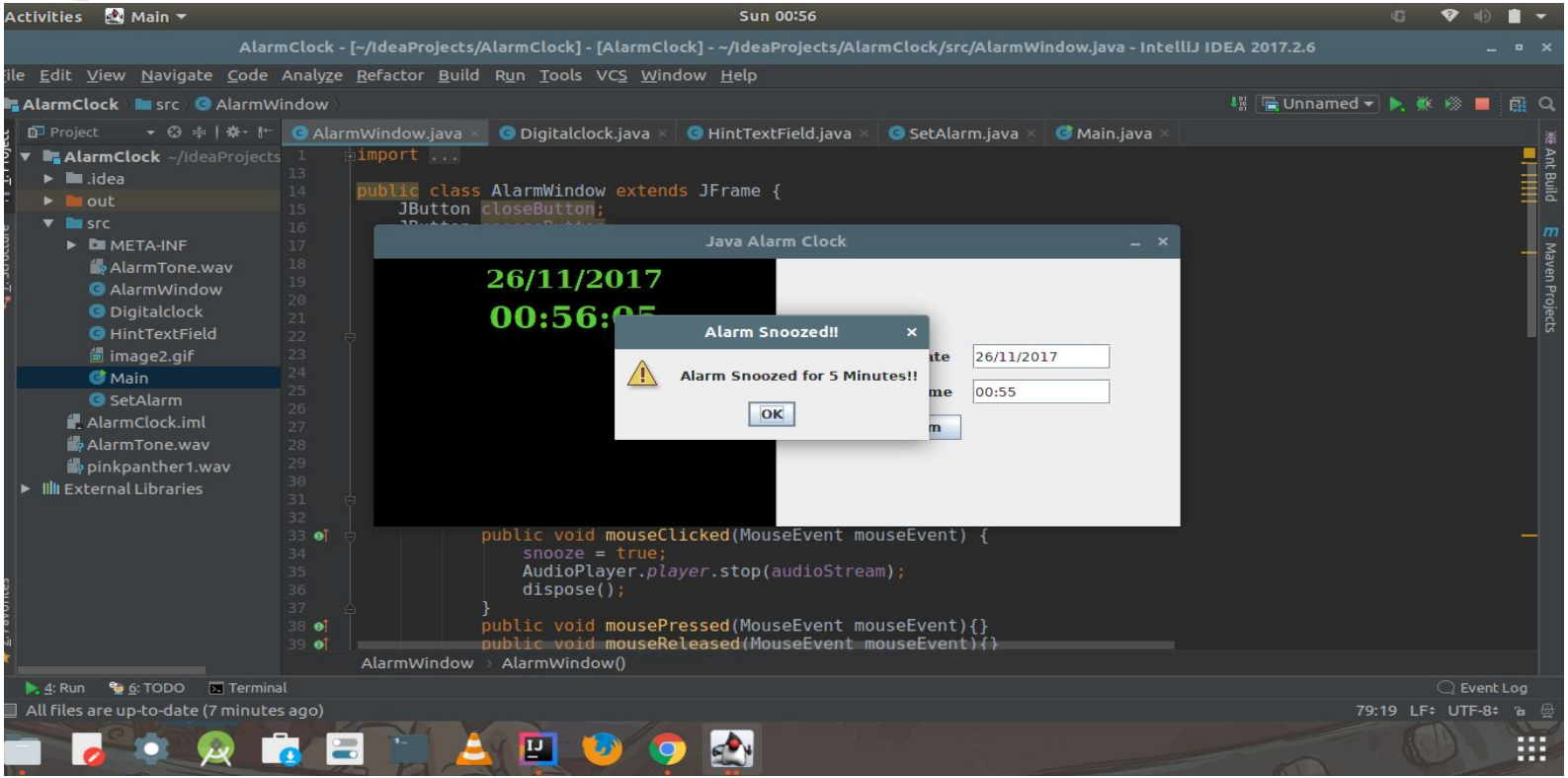
Frontend (Continued....)

- It finally arrives, when the clock ticks the time you have set a frame popped up and a song is played with it.
- It has two buttons either stop alarm, or to snooze for 5 minutes.



Front End (Continued….)

- When you are in no mood to wake up, then you wait for another alarm to wake you up, so finally you snooze, in our alarm a window will pop up saying Alarm snoozed.

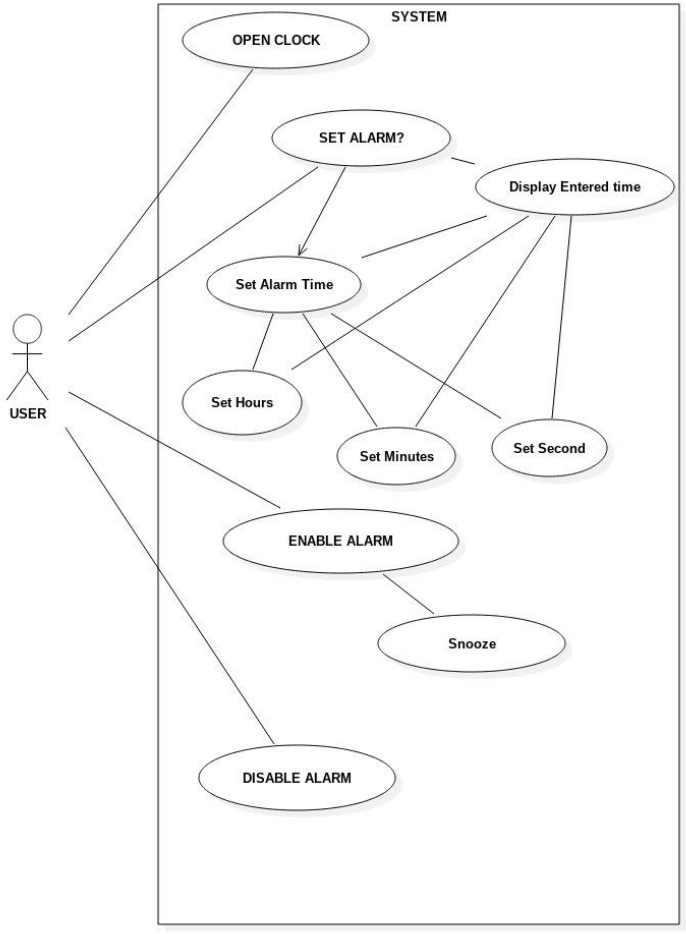


Back End (Horror)

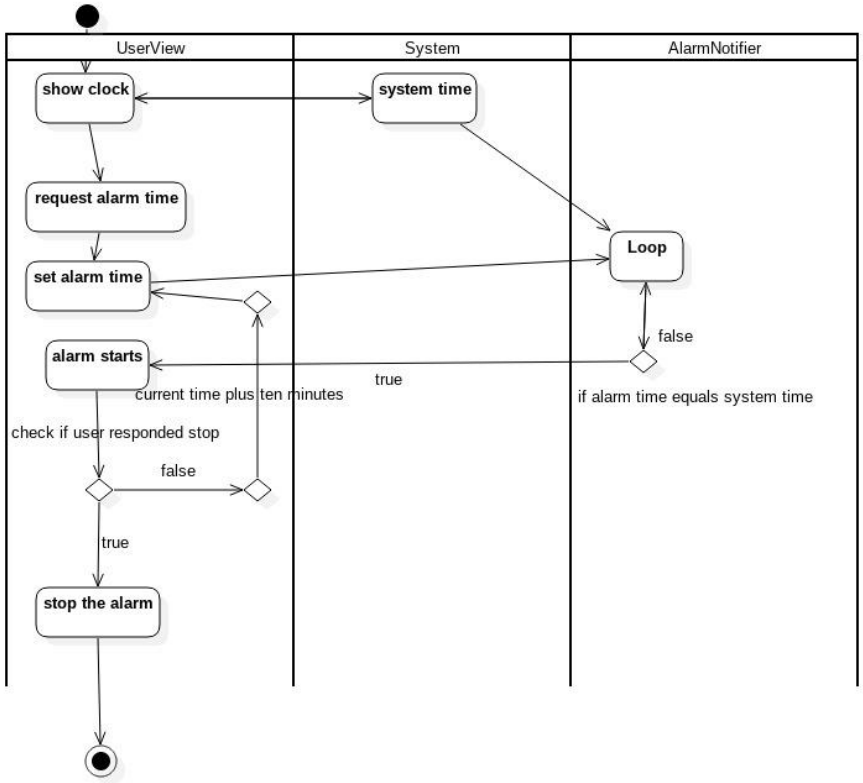
- Apart from the main class, our code includes 3 classes namely :
  - SetAlarm
  - AlarmWindow
  - DigitalClock

- ❖ SetAlarm : This Class performs the functionality of setting the allarm according to the input from the user. It uses an object of Timer Class to set the timer for the provided time.
- ❖ AlarmWindow : This class contains the functionality of the window that pops once the Alarm starts ringing. It has functions like stopping the Alarm or snoozing it to 5 more minutes(exclusively for sleep deprived engineers :p)
- ❖ DigitalClock : This class is the class containing the basic Clock used. It works on updating the time every second on the front end.

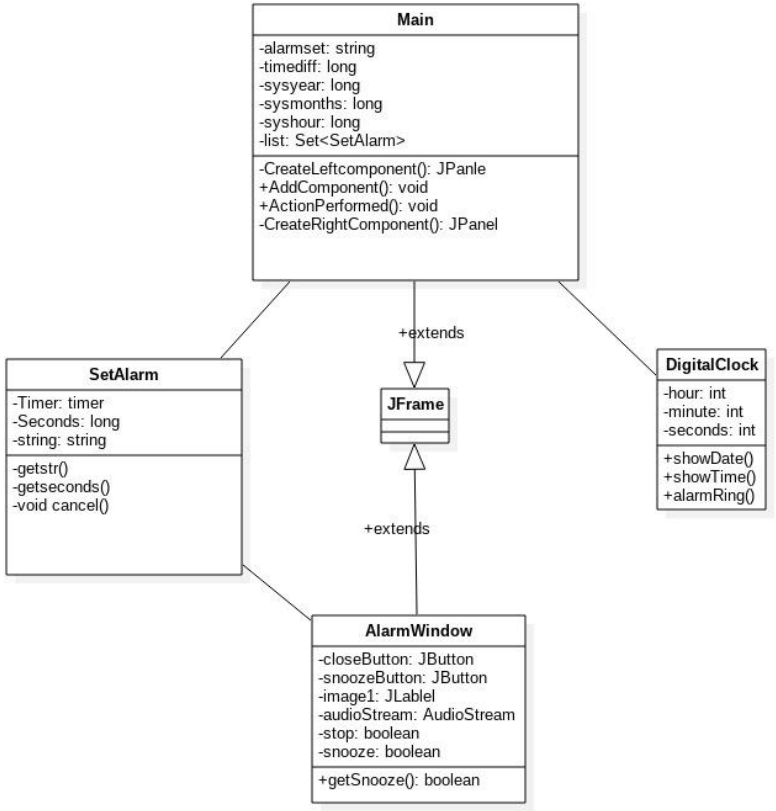
USE CASE DIAGRAM



ACTIVITY DIAGRAM



CLASS DIAGRAM



Bibliography

- When we were allotted with our projects we were horrified as we had no knowledge about how to start and how to cross this hurdle.
- Then came the beautiful thing of IIITA into play - “Internet of IIITA”. We spent 3-4 days learning the basic concepts of GUI, how to insert data, buttons and various other features.
- Stack Overflow came to rescue us.
- “Java2 Reference” - the book suggested by Dr. Rahul Kala also helped a lot in clearing our doubts in various portions of the project.
- Slides of Dr. Ranjana Vyas also helped a lot in learning and understanding the basics of UML, thus assisting us in construction of our structural and behavioural diagrams.