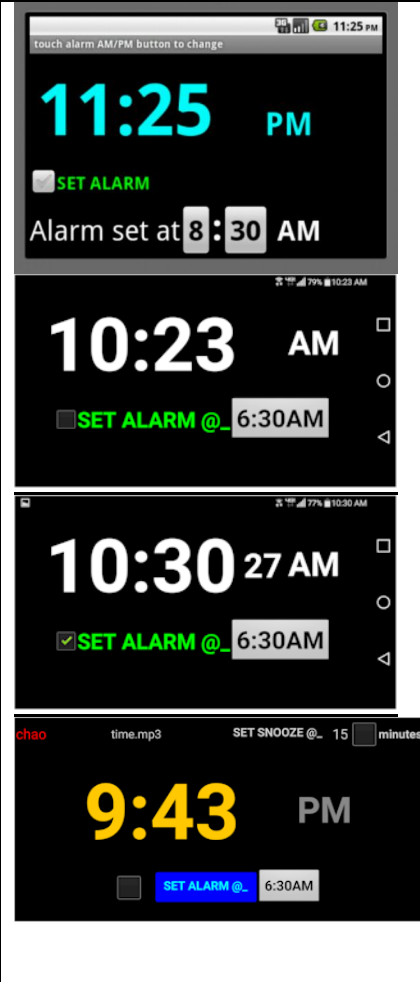


Lab 12 Alarm Clock by Nathan Chao

Google app invento alarmclock to get to see numerous tutorials on how to construct an alarmclock app.

Convert all tutorials designs to Landscape mode as shown in samples below

	<p>Make sure you choose font sizes to fill entire screen for a good design. Tiny numerals and poor design will not receive checkoff for this lab exercise.</p> <p>The top screenshot is a clock that uses regular listpicker to choose hours and minutes and a toggling AM/PM button</p> <p>The 2nd and 3rd screenshots is clock that uses Timepicker to set alarm time. There are tutorials for both versions. The timepicker looks more polished. 2nd screen hides seconds. 3rd screen reveals seconds on demand</p> <p>4th screen capture on bottom shows most most advanced clock version3</p> <ol style="list-style-type: none">1. The time numerals are displayed on a button that can quickly turn off the alarm once it is activated.2. The alarm time set is automatically saved using tinyDb so the next time the clock app is opened, the last set alarm will be displayed.3. In normal display mode, only the hours and minutes are shown without the seconds. Seconds appear or disappear when AM/PM button is pressed.4. Multiple alarm times can be saved.5. A choice of 4 different alarm tunes can be selected, played anytime and saved6. Snooze feature is added. If snooze is checked, when person turns off alarm, the alarm will restart again after a delay time selected by user.7. Multiple color choices for display digits that are saved after selection.
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To see how all the above additional features work, download Alarm3.apk from BB and install.

Your grade on this lab will depend on how many additional features are successfully implemented in your app along with a report showing those blocks and explaining how they worked, along with the usual relevant screenshots and app intro used in previous lab templates and reports. If you are the only one to implement successful unique features, your grade will be better. So help others, but do not share your hard earned efforts.

Grade Method,

C. basic working app like screenshot 1 with your name in upper left corner

C+ one extra feature with report documenting what you did with appropriate screenshot.

B- 2 extra features with documentation report

B 4 extra features with documentation report

B+ 5 extra features with documentation report

A- 6 extra features with documentation report

A all 7 extra features with good documentation report.

How to separate out the seconds and AM/PM

To get time displayed without seconds you need to separate out hours, minutes and seconds using the text split at (colon) : which will store in designated list the hours, the minutes and the seconds with AM/PM. To separated seconds from AM/PM, split at space since they are separated by a space.

Here is all the instructions inside the When Clocktimer routine or block enclosure

Normally call clock format time Now results in a display like 11:49:23 AM

If I apply a split at : block to that text result, the resulting segments 11, 49, and 23 AM will be stored in a named list at index 1, 2 and 3.

So first block inside clocktimer is (each parenthesis is a separate block you need to retrieve)

1. (Set predefined list called timesegments to)(Split at (: (call format time (time now))

Now that all the time is separated by hr min and sec AM/PM. You will load the first 2 items of timesegments list separated by a new : using the join instruction into a timedisplaybutton labe. This same button will be used to turn alarm player off when touched.

2. (Set timedisplaybutton text to)(join (select timesegments list item 1)to (:)to (list item 2))

If you now join the from list items 1 and 2 with : in middle, you will restore 11:49 without the seconds and AM/PM attached.

next to separate seconds from AM/PM, we can segment which we used in the musicbox to separate note number from duration.

Seconds starts at first position and has a length of 2 and is found in select timesegment list as item 3. So here is routin to load seconds into a label next to the timebutton. The fontcolor of this label will be varied by the AM/PM button that is just next to the seconds label.

3. (set secondslabel text to)(segment start at 1 length 2 applied to (select timesegment list index 3)

Next we will put the proper AM/PM into the button described above using segment again except this time the start position is after the seconds and space between them so start position is 4 and length of 2

4. (set am/pmbutton text to)(segment start at 4 length 2 applied to (select timesegment list index 3)

Now thats it to the changes. You can use the same alarm set and trigger routine as that found in tutorial. Note you need to use the entire time display before it was segmented to compare witht the assembled alarm time with hours joined to minutes and then seconds followed by a space and then Am/PM.

Program timebutton click to stop player

To hide and unhide seconds label which is placed between minutes and AM/PM, just chage font color from white to black when AM/PM button is clicked. Or you could make the label not visible when seconds is not wanted.