ASSIGNMENT 1
DUE ON: Sunday October 15, 2023, 11:59 PM
Android Wear Stopwatch App
Total Mark: 10

1. Overview: This document specifies the functional, non-functional, and deliverable requirements for the **Android Wear Stopwatch App** development assignment.
2. Scope: This assignment is designed to allow you to master the implementation of the standard GUI elements that you will encounter on the current generation of Android Wear devices. You are tasked to implement a user interface that uses the UI elements outlined in this document, for developing an Android wear application for a stopwatch. The Android Wear Stopwatch App's goal is to provide users with a simple and easy-to-use stopwatch tool on their Wear OS (Android Wear) devices. For various timing requirements, the app allows users to start, stop, and reset the timer.
3. Functional Requirements: The following functional requirements must be implemented to complete the assignment. Create a new Android Wear project. Application should be named in the format 'YournameAssignment1' (Example: PeterAssignment1).

3.1 Start Stopwatch:
- The app's user interface must include a "Start" button.
- When the user taps the "Start" button, the stopwatch timer should begin to count.
- When the stopwatch is running, the "Start" button should become disabled.
- A textview should be populated with the elapsed time.

3.2 Stop Stopwatch:
- The app's user interface must include a "Stop" button.
- When the user taps the "Stop" button, the stopwatch timer should come to a halt.
- When the stopwatch is paused, the "Stop" button should be disabled.

3.3 Reset Stopwatch:
- The app's user interface must include a "Reset" button.
- The stopwatch timer should be reset to zero when the user taps the "Reset" button.
- When the stopwatch is running or paused, the "Reset" button should be disabled.

4. Non-Functional Requirements: The following non-functional requirements must be implemented to complete the assignment.

4.1 User Interface:
- The app's user interface (UI) should be designed for small Wear OS screens to ensure readability and usability.
- Buttons should be sized and spaced appropriately for touch interaction.
- When buttons are tapped or disabled, the UI should provide clear visual feedback.

4.2 Compatibility: The app should work with Wear OS devices running Android 11 or higher.

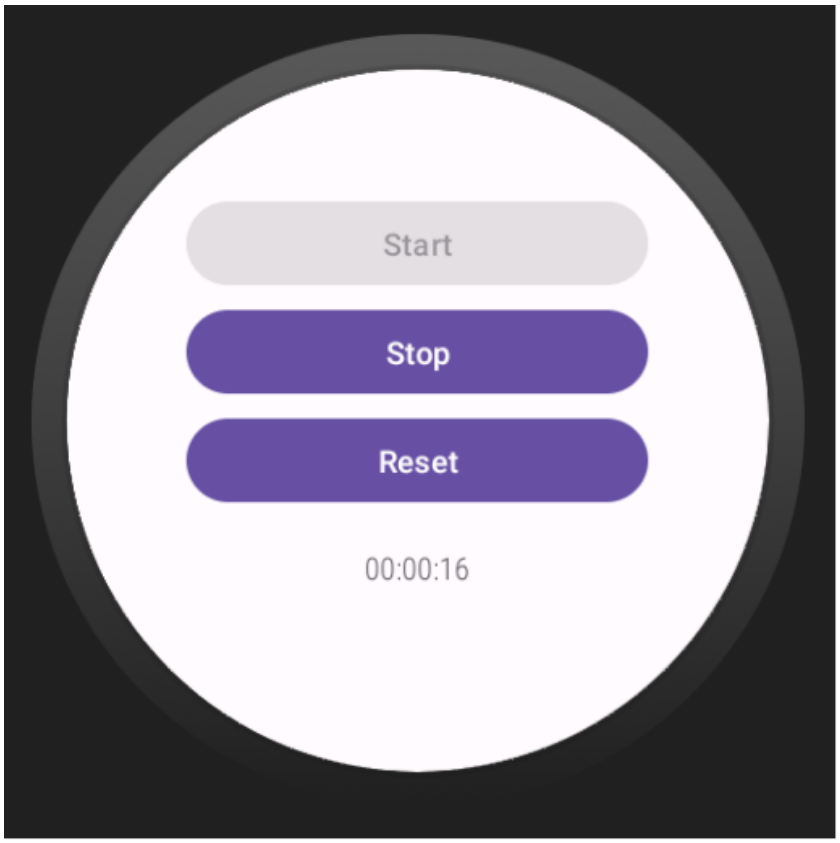
4.3 Usability:
- The app should have an easy-to-use interface that requires little user intervention.
- User interactions should be quick and without noticeable lags.

5. Design and Architecture

5.1 App Architecture
- The app will have a simple single-activity architecture.
- For a consistent user experience, it will use standard Android Wear UI components and controls.

5.2 User Interface Design
- The user interface will feature "Start," "Stop," and "Reset" buttons.
- Buttons will be labelled appropriately and visually distinguishable.
- The UI will display the elapsed time in an easy-to-read format.

See Image Below:



6. Deliverable Requirements

6.1 Comment the Code: You must provide meaningful comments to every class, method, and every and any significant code segment.

6.2 Source Code: You must submit YOUR OWN WORK via DropBox.

- You may not source answers from anywhere other than your own independent work.
- No communication from other students or any other person.
- You may not share these instructions or any solutions with anyone else.
- Failure to follow any of the above notes (or any other expectations for academic integrity) will result in an academic offence being filed.

6.3 Screen Shots: Include all relevant screenshots of your running application and commented Java code in a Word document. Do not zip this document. **Commented code should be pasted as text.** Submission will not be considered for evaluation if commented code is pasted as an image and a grade of 0 (zero) will be awarded. Name this file as 'YournameAssignment1.docx' (Example: PeterAssignment1.docx)

6.4 Export your Android Wear application as a zip file. (Choose File -> Export -> Export to Zip File)

6.5 Upload the Word document and the zip file of the application package on e-Conestoga into the folder '**Assignment 1 – Android Wear Stopwatch**'.

6.6 This is an individual assignment.

6.7 For late submission: marks will be deducted per day as specified below.

6.8 Please check the marking sheet in the next page for the distribution and deduction of marks.

6.9 Due Date: **Sunday October 15, 2023, 11:59 PM**.

7. Demo

7.1 You need to demo the application in-person during your allotted time slot. The exact time slot for demo will be notified in due course of time.

Marking Sheet

Description	Marks Allocated	Marks Achieved
UI designed as specified	2	
UI design optimized for small wear OS screens	2	
Implementation of all functionalities as per requirements	6	
Deduction		
Non submission of the zip of the application	100%	
Non submission of the Word documents with the screenshots and meaningfully commented Java code (Java code should be pasted as text)	100%	
Non implementation of ViewBinding	90%	
Non implementation of Listener interfaces (Note: The Listener interface should be implemented in the class level)	60%	
Hardcoded text found in the UI	50%	
Hardcoded color found in the UI	50%	
Hardcoded styles found in the UI	50%	
Hardcoded dimensions found in the UI	50%	
No show for demo	60%	
Failure to answer questions during demo (Per question)	10% x --------	
Assignment Standards Violation (proper project name, submission docs name etc) (Per violation)	10% x --------	
Programming Standards Violation (Per violation)	10% x --------	
Late Submission (softcopy) (Per day)	-------- days (See table below)	
Bugs (including missing requirements mentioned in this specification)	5 to 10% based on severity	
Total		

Late Penalty (Softcopy submission)

Days Late	Penalty %
1	5
2	10
3	20
4	40
5	80

6	100

Please note: How "Days Late" is calculated: Your assignment is due on Sunday 11:59pm. You are considered 1 day late if you submit on anytime on Monday (until 11:59PM). If you submit anytime on Tuesday (until 11:59PM). you are considered 2 days late.