



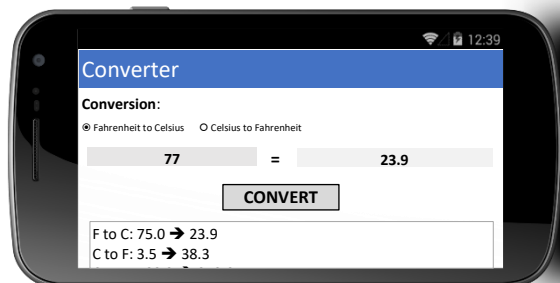
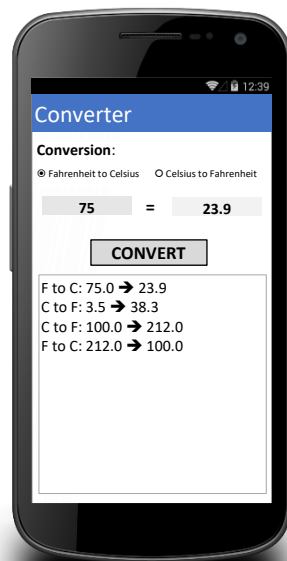
## CS 442: Mobile Applications Development

### Assignment 1 – Temperature Converter

Your assignment is to create a Temperature Conversion app as described below.

#### App Requirements

- The app should allow the user to select either Fahrenheit-to-Celsius or Celsius-to-Fahrenheit conversions.
- User the following formulae for conversion:
  - F to C:  $(F - 32.0) / 1.8$       Example (75F):  $(75.0 - 32.0) / 1.8 = 23.9C$
  - C to F:  $(C * 1.8) + 32$       Example (15C):  $(15.0 * 1.8) + 32.0 = 59F$
- The temperature value (the value to be converted) should be entered by the user. *Only numeric decimal values should be allowed.*
- Pressing a *Convert* button should generate the converted temperature value and display it on the screen. *All converted values should be displayed out to 1 decimal place only.*
- All conversion operations and their results should be added to the “history” – a list of converted values. The history of converted values must be scrollable.
  - Examples:
    - F to C: 75.0 → 23.9
    - C to F: 15.0 → 59.0
- The app must look and act consistently in either portrait or landscape orientation. No data content should be lost upon rotation.
- Concepts and practices discussed in class and presented in course materials must be followed.
- The below are examples of how the app should look (in both orientations):



### Assignment Assistance

Your course TA is available to assist you with your assignment if needed. Questions on assignment requirements and course concepts can be sent to the instructor.

### Submissions & Grading

- Submissions must consist of your zipped project folder (please execute Build =>Clean Project before generating the zip file). Submissions not following these requirements will be penalized.
  - *Note: To make your submission zip file smaller, before zipping, you can remove the ".gradle" folder (found in your project's root directory), and remove the "build" folder (found in the "app" folder - "app" can also be found in your project's root directory).*
- Submissions should reflect the concepts and practices we cover in class.
- Late submissions will be penalized by 10% per week late. (i.e., from one second late to 1 week late: 10% penalty, from one week late to 2 weeks late: 20% penalty, etc.).
- The following are the key points that will be examined in Project when graded:
  - 25% UI Design and Appearance (in both Project and Landscape orientation)
  - 25% Input operation
  - 25% Conversion & Results Display
  - 25% Conversion History

*If you do not understand anything in this handout, please ask.*

*Otherwise the assumption is that you understand the content.*

***Unsure? Ask!***