

Lab 1

Deadline:

21 Mar 2020 end of day

Task:

Write BMI application:

The app collect data about mass and height and allow user to count his/her BMI.

- (1p.) Implement layout similar to:

The image shows two side-by-side UI layout designs for a BMI application. The left design is on a white background and includes labels 'Mass [kg]' and 'Height [cm]' above input fields, a 'COUNT' button, and a 'BMI_VALUE' text field. The right design is on a dark blue background and includes labels 'Mass [kg]' and 'Height [cm]' above input fields, 'massEditText' and 'heightEditText' labels, a 'COUNT' button, and a 'BMI_VALUE' text field.

- (2p.) Add logic to button which valid both fields and count BMI when they are correct or shows error in other case. BMI counter should be separate class which is used in activity, it can also validate values of mass and height.

Hint: EditText has inputType attribute which allow to define what kinds of data user can put in, for example number.

- (2p.) Add options menu (onCreateOptionsMenu() in Activity), which allow to switch between metric and imperial type of data. Add required support.
- (1p.) Add option in menu which shows information about author in separate activity.
- (1p.) Text field which display BMI should change the color according to BMI classification (normal, overweight, etc.)
- (2p.) After click on BMI_VALUE text field user should see new activity with BMI value and description according to BMI classification.

Hint: use startActivityForResult() to share value of BMI with new activity

- (1p.) Write unit test for both BMI counters (imperial and metric). You can use KotlinTest or Junit.
- (1p.) Write or record (and cleanup) UI test using Espresso.

Assessment (regarding all labs)

- Code should be written according to SOLID principles.
- Code should be written in clean way (readable and without hardcoded values).
- All Strings variables which are visible for user (in UI) should be stored in strings.xml.
- Margins and paddings should be stored in dimens.xml.
- UI should be nice and clean. Material design preferred.
- Code of application should be delivered as link to github repository via email.
- Ready app should be presented during laboratories according to lab schedule.