Samsung Android Application Development - MAPD 711
Hands-On Test

Open Book Exam Rules:

During the hands-on test, all students are expected to follow the rules outlined below:

1. The hands-on test consists of designing and developing an app in Android Studio.
2. Use of laptops or Mac and other materials:

a. In the test, you are allowed to use any materials, including slides, books, assignments/programs created by you, or the solutions/examples provided by the professor, Android developer Documentation, and the Internet.

b. Mac or Laptops must be used in the test.

c. The solution project, code, and screenshots (.zip file) will be submitted in e-centennial Dropbox.

d. Students are not allowed to use someone else's solutions – only solutions created by them or the professor.

e. Students must follow the college academic integrity policy. (refer e-centennial news item academic integrity)

Exam Procedure:

Students can open or start the quiz to see the test paper and do the following steps:

a. Firstly, read all the given instructions and tasks in the test paper.

b. Then create a new android studio project, and complete all the assigned tasks accordingly.

c. Run the project with an emulator or virtual device, or connected device.

d. Take screenshots for your inputs (Input Activity screen) and outputs (Result Activity screen) or more screenshots.

e. Create a submission folder, include the project and screenshots, and convert the submission folder into a zip file. (You must follow the naming conventions as provided)

f. Submit your zip file into the "Test" dropbox.

g. Type "completed" in the answer (input) box below and then click "Submit Quiz."

Description and tasks:

1. In this test, students must create a new Android Studio project named "YourName_MAPD711_Test" and create two activities such as InputActivity and Result Activity.

2. The Input Activity's UI design includes the following to get the user inputs to calculate the BMR (Basal Metabolic Rate) and Needed calorie based on the activity level. (See the first screenshot)
   Title: Metabolism Calculator App
   Gender: Male and Female
   Age, Weight, and Height
   Activity levels: This includes 4 different activity levels values as follows:

-
  o Little OR No exercise
  o Light exercise 1–3 days per week
  o Moderate exercise 3–5 days per week
  o Hard exercise 6–7 days per week

   If checkbox checked, a web page (https://www.cbc.ca/news2/background/exercise_fitness/metabolism.html) should be loaded in the ResultActivity screen. (You can use any other metabolism related website)

3. BMR and Calorie needed calculations are based on these equations (formula):

   a. **Basel Metabolic Rate (BMR):**
   For men, use the following equation:
   BMR for Men = (10 * weight [kg]) + (6.25 * height [cm]) − (5 * age [years]) + 5

   For women, use the following equation:
   BMR for Women = (10 * weight [kg]) + (6.25 * size [cm]) − (5 * age [years]) - 161

   b. **Calories needed to maintain weight:**

   The values used for the activity levels in the equation are as follows:
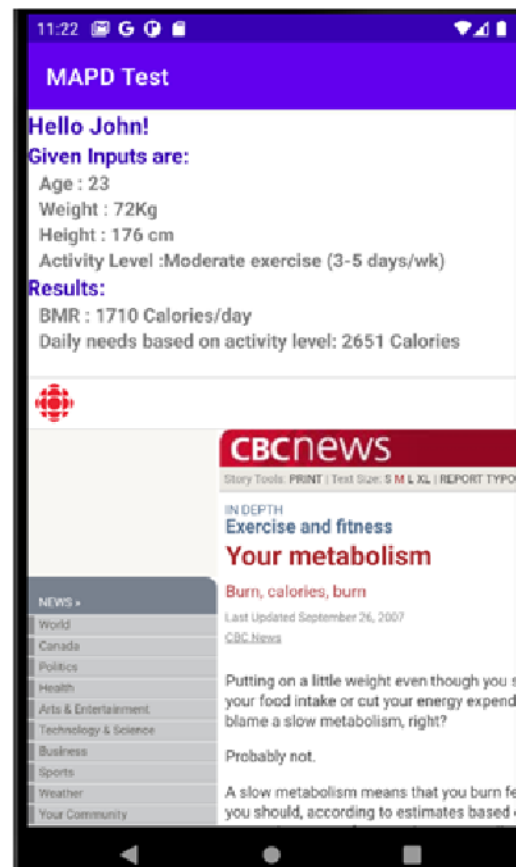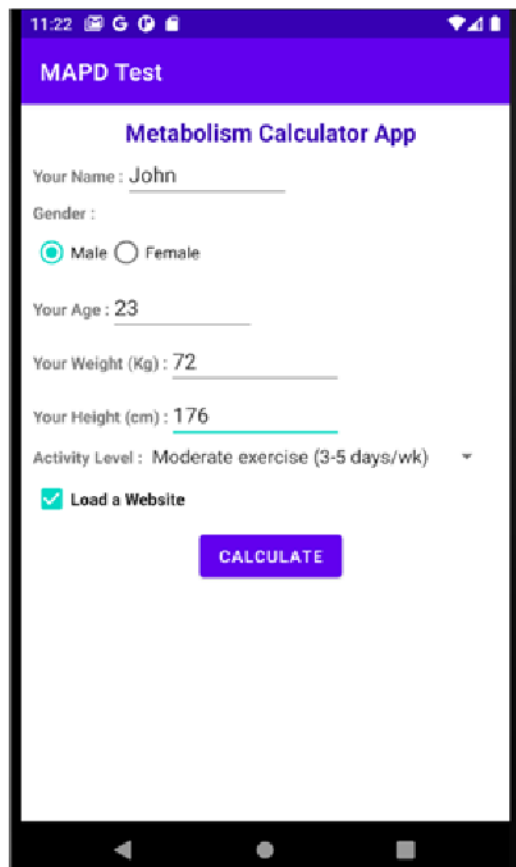   **1.2** - Little OR No exercise
   1.375 - Light exercise 1–3 days per week
   1.55 - Moderate exercise 3–5 days per week
   1.725 - Hard exercise 6–7 days per week
   Calories needed to maintain weight = BMR x activity level

4. When we click the "**Calculate**" button, Inputs and calculated values should be transferred to the ResultActivity using a shared preference object.

5. ResultActivity should print the values using Text View controls, as shown in the second screenshot.

Assessment Rubrics:

InputActivity UI and Coding	50%
ResultActivity UI and Coding	20%
WebView implementation	15%
User Friendliness & Resources	10%
Screenshots	5%
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Total:	100%

Android App Naming rules:

You must name your Android Studio module according to the following rule:

YourName_MAPD711_Test
Example: **john_ MAPD711_Test**

Submission rules:

Submit your modules as **zip files** that are named according to the following rule:
YourName_StudentNumber_Test.zip
Example: **john_9000000_ Test.zip**

Negative points:

The negative or minus point will be given when students ignore the instructions stated in the test paper (Question paper).

1. Naming conventions for the project and the submission folder.

2. Submission of screenshots.

3. Copying or modifying existing projects must be avoided. (Student must create a new project)

4. Failed to troubleshoot or debug errors.

Double-check your submission folder before the submission and after submission, download your zip file, then confirm your submission includes the right project with all the necessary coding files.

Academic integrity

All students must follow the academic honesty policies regarding Plagiarism and cheating on assignments, Quizzes, or Tests. Centennial college's Academic Policy will be strictly enforced. To support academic honesty at Centennial College, all academic work submitted by students may be reviewed for authenticity and originality by utilizing software tools.

Any practices are identified in students' solutions; the action will be taken based on the academic honesty policy.
Students must follow the college academic integrity policy; otherwise, it will lead to zero.