A black and white text with a person standing in front of it

Description automatically generated

**DIPLOMA IN INFORMATION TECHNOLOGY**

**MOBILE APPLICATION ASSIGNMENT 1**

**SUBJECT CODE: DIT2223**

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***User Manual***

Welcome to the User Manual for the BMI Calculator. You can monitor and control your body mass index (BMI) by using this tutorial to help you understand and utilize your BMI calculator efficiently.

***Features***

* Digital display
* Input options for metric (kg/m²)

***Tutorial:***

**1. Gender:**

* Press either Male or Female
* Gender will be focused after chosen

2. **Height:**

* Adjust the Slider to choose your height
* The height will not falls below 120cm and will not exceed 220cm

3. **Weight:**

* Press the weight editable text.
* Use the number keys to enter your weight.

**OR**

* Press the Plus button to make 0.1 addition on the weight
* Press the Minus button to make 0.1 subtraction on the weight

**AND**

* Weight will not falls below 20kg and exceed 150kg

4. **Age:**

* Press the age editable text.
* Use the number keys to enter your age.

**OR**

* Press the Plus button to make 0.1 addition on the weight
* Press the Minus button to make 0.1 subtraction on the weight

**AND**

* Age will not falls below 10 and exceed 100

5. **Calculate Result:**

* Make sure all your information is correct
* Press the Calculate Button after checking your information
* The device will display your BMI on the screen

**6. Understanding Your Results**

**BMI Categories:**

* + Underweight: BMI < 18.5
  + Healthy: BMI 18.5 - 24.9
  + Overweight: BMI 25 - 29.9
  + Obesity: BMI ≥ 30

**7. Calculate again**

* Press the Calculate Again Button

Thank you for choosing our BMI calculator. We hope it helps you in maintaining a healthy lifestyle.

***Sample Screenshots***

A cell phone with a pink gradient background

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*Figure 1: Icon of the app*

I’ve changed the icon of the application to a more delegate icon in order to let users directly know that this is a Bmi Calculator Application.

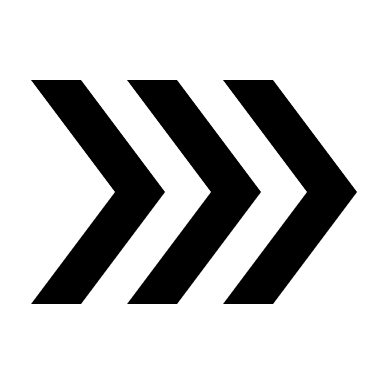
A screen shot of a device

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*Figure 2: Splash screen of the app*

I added a splash scereen to the application to make the interface is not that boring.

A screenshot of a cell phone

Description automatically generatedA screenshot of a calculator

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*Figure 3: Page after the Splash Screen, Calculator Page Figure 4: After selected gender and entered value*

I’m using purple background color to let the page looks more advanced and modern and it’s also user friendly, because some of the people are using their phone on night, so the deep background color can prevent the phone's brightness to flash your eyes. Other than that, the Slider, Plus and Minus button has respectively changed to white and blue. If the user doesn’t wants to use the Plus and Minus button function, they can also just tap the number and edit the numerical number as it is an EditText function. In addition, by selecting the gender, it will focused into #5C3683, a bright purple color, so that the user can know which gender they chosen. After entering all their information, they can click on the calculate button to perform the calculations.

A screenshot of a cell phone

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*Figure 5: Result Page*

In this page, the users can see all their information such as bmi, weight status, to see whether they are healthy or no. Moreover, the user can also see their height, weight and age to check whether if they enter wrong ay values. Lastly, if the user wants to Calculate another Bmi, they can press the Calculate Again button to perform another calculation.

**Reflection Essay**

Mobile application is a great subject to let diploma courses students to learn the fundamentals of creating an android application. Thus, I aprreciate that I have the opportunity to design and develop an android mobile application. The development experience was an eye-opening adventure that increased my technical proficiency, problem-solving skills, and comprehension of software development procedures. Along with expanding my understanding of developing mobile applications, this difficult yet rewarding experience taught me priceless lessons about tenacity, ingenuity, and never-ending learning.

According to the performance of the application I made, I will give 7 out of 10 to myself. These 7 marks included the design layout of the calculator page, the design on the result page, the slider implementation, the plus and minus button for adjusting the weight and age last but not least, the splash screen. In contrast, there were 3 marks left about the functions I am not able to be done such as changing color while hovering around the button, a better user interface, holds the add or minus button and the numerical number will increase or decrease automatically so that I doesn’t needs to use EditText feature due to my limited time and knowledge. So, I should keep learning, pay more attention to classes and improve my skills and understanding of this subject to develop a more completed application.

In this project, I face problems such as I was unable to bring the values from CalculatorPage.java to ResultPage.java and perform my calculations. Thus, I start researching online to search which solutions can help me to solve the problem. Accordingly, I found a function which is called Intent.putExtra(String name, String value) that allows you to put any extra String data at the value parameter, and the name of its value, so that it can pass this value into the intent object. To receive the value, you should use the method Intent.getStringExtra(String name). It’s a good practice to let me have the experience to research and solve the problem by myself.

To sum up, I am grateful for the challenges and successes that have shaped my understanding of mobile application development and inspired me to pursue further innovations in this dynamic field. I'll keep honing my programming abilities by watching tutorial videos on YouTube or by learning more about the course subject in advance from my lecturer.

**Marking Rubric for Assignment**

The assignment will be marked based on the following criteria. Include this sheet as the last page of your submission.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Criteria** | **Very Poor** | **Poor** | **Good** | **Expert** | **Allocated Marks** |
| **Program Execution** | (0 – 4 marks)  Weak Program execution with major flaws | (5 - 9 marks)  Average Program execution with some flaws | (10 - 14 marks)  Good Program execution with minor flaws | (16 - 20 marks)  Excellent Program execution |  |
| **Program Correctness (compliant with the specifications stated in assignment)** | (0 – 4 marks)  Little coverage of assignments requirements with weak implementation | (5 – 9 marks)  Comply some of the assignment requirements with average or below average implementation | (10 – 14 marks)  Comply with the most of the assignment requirements with good implementation | (16 - 20 marks)  Fully comply with the assignment requirements with excellent implementation |  |
| **Creativity & Innovative** | (0 – 4 mark)  Weak creativity product produced | (5 – 9 marks)  Average product with average creativity | (10 - 14 marks)  Good product with good creativity idea | (16 – 20 marks)  Excellent product which full with creativity and fresh idea |  |
| **Output & Layout** | (0 – 4 mark)  Weak/no output & layout produced | (5 – 9 marks)  Poor/Average output & layout produced | (10 - 14 marks)  Good output & layout produced | (16 – 20 marks)  Excellent output & layout produced |  |
| **Reflection Report**  **(\* students’ marks will be varied here)** | (0 – 1 mark)  Weak report provided with major omission | (2 marks)  Poor/Average report provided but some aspects are not elaborated in details | (3 marks)  Good report provided with minor omission in certain aspects | (4 – 5 marks)  Excellent reflection report provided |  |
| **Presentation**  **(\* students’ marks will be varied here)** | (0 – 7 mark)  Weak and unable to demonstration product clearly | (8 marks)  Poor/Average in overall presentation | (9 – 11 marks)  Good in overall presentation | (12 – 15 marks)  Excellent in overall presentation |  |