



SEMESTER I SESSION 2025/2026
SECJ1013 PROGRAMMING TECHNIQUE 1

ASSIGNMENT 1

GROUP MEMBERS : 1. YONG SEE EN (A25CS0168)
 2. MUHAMMAD HAFIZ BIN SUHAILI (A25CS0106)

GROUP NUMBER : 5

SECTION : 02

LECTURER NAME : DR. MUHAMMAD LUQMAN BIN MOHD SHAFIE

SET NUMBER : 1

DATE : 2 November 2025

SET 1

Based on the problem given below, analyze the problem and design its solution using a **flow chart**. The flow chart must be drawn by using any appropriate drawing tools such as Microsoft Visio, draw.io (<https://app.diagrams.net/>), and Lucid chart (<https://www.lucidchart.com/pages/examples/flowchart-maker>). You need to develop a Basal Metabolic Rate (BMR) Calculator to estimate a basal metabolic rate: the amount of energy expended while at rest in a neutrally temperate environment, and in a post-absorptive state (meaning that the digestive system is inactive, which requires about 12 hours of fasting) (**Source:** <https://www.calculator.net/bmr-calculator.html>). **Figure 1** shows the example of the BMR calculator application as a guide to developing your own BMR calculator.

The screenshot shows a BMR calculator interface. On the left, there are four input fields: Age (25, US Units selected), Gender (male selected), Height (180 cm, Metric Units selected), and Weight (60 kg, Other Units selected). Below these is a '+ Settings' link and a 'Calculate' button. On the right, the result is displayed as 'BMR = 1,605 Calories/day'. Below the result is a table titled 'Daily calorie needs based on activity level' with the following data:

Activity Level	Calorie
Sedentary: little or no exercise	1,926
Exercise 1-3 times/week	2,207
Exercise 4-5 times/week	2,351
Daily exercise or intense exercise 3-4 times/week	2,488
Intense exercise 6-7 times/week	2,769
Very intense exercise daily, or physical job	3,050

Below the table are three definitions: 'Exercise: 15-30 minutes of elevated heart rate activity.', 'Intense exercise: 45-120 minutes of elevated heart rate activity.', and 'Very intense exercise: 2+ hours of elevated heart rate activity.'

Figure 1: BMR calculator application
(**Source:** <https://www.calculator.net/bmr-calculator.html>)

Please take note that in your solution (flow chart), you **MUST** apply:

- Branching/ selection (if..else)
- Loop/ repetition (repeat..until/ do..while)
- User-defined function flow chart. Besides the **main** function flow chart, your solution needs to design at least **ONE** more other function flow chart. Use appropriate arguments for the function.

Flowchart:

