

	NAME	FARAH HANIS BINTI AZAMAN	
	CLASS	25DDT21F1023	CLO2(P): /100
	SESSION	SESI I: 2023/2024	
	COURSE CODE	DFP50273 – INTEGRATIVE PROGRAMMING AND TECHNOLOGIES	
	ASSESSMENT	PRACTICAL EXERCISE 1	
	LECTURER	PN. ZALIHAR BINTI EMBONG	

**CLO1** : Construct the elements of GUI from java package that integrates database for an interactive GUI application.

**TOPIC** : 2.1 Builds interface using swing components  
: 2.2 Organizes Layout Manager

**DURATION** : 2 Hours


#### INSTRUCTIONS:

Sekolah Kebangsaan Taman Sari 2 is organizing a mathematics week program for Level 1 students at the school. Through the program, students will receive random basic math calculation questions. To check their answers, the teachers will use the Calculate Number application that has been installed on the computers in their lab. As a Java developer, you are required to develop that applications as follow the requirements below: (CLO2:P3)

- i. Display title 'Calculate Number' in the title bar.
- ii. Set the size of frame 600 x 250.
- iii. You must add some components:
  - Label and Text fields
  - 9 buttons labeled number 1-9.
  - 5 buttons for Add, Sub, Divide, Multiply and Reset the numbers.

To manage the layout of that components, consider all this following: (CLO2:P4)

- Add the label and textfield for a form of calculate number to a suitable panel. Put that panel to the NORTH in BorderLayout. Put any background color for the region.
  - Add the buttons 1-9 to a panel. Then, add that panel that contains all those 9 buttons into another panel. If the **number in that button is odd**, color the button as a **“red”** colour. Lastly, put that panel in the CENTER of BorderLayout. Put any background color for the region.
  - Add the button Add, Sub, Divide, Multiply and Reset to a panel, then add that panel into SOUTH in BorderLayout. Put any background color for the region.
- iv. You can add the variety of fonts and colour.
  - v. The visual for your output guide is as shown below in **Figure 1**:

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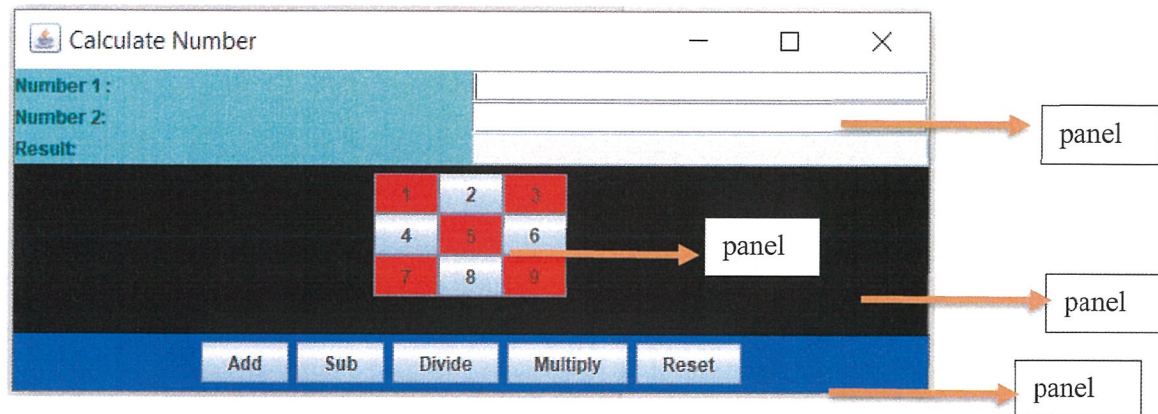


Figure 1

*\*\* Your creativity was needed in design the application.*

  
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 Ketua Program (PPPT DH44)  
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Performance Area	ADVANCED 4	INTERMEDIATE 3	BEGINNER 2	WEAK 1	Weightage	Score
Declaration classes and import libraries	Able to declare class using proper, clear, and understandable name.  Able to import ALL libraries required correctly according to the question.	Able to declare class using meaningful name.  Able to import MOST of the libraries required correctly according to the question.	Able to declare class using meaningful name.  Able to import SOME of the libraries required correctly according to the question.	Able to declare class using vague class names.  Able to import 1-2 libraries correctly only according to the question.	10	(__/4) x 10 =
Used of appropriate object name	ALL of the components used appropriately object name with reasonable prefix.	MOST of the component used appropriately object name with reasonable prefix.	SOME of the component used appropriate object name with reasonable prefix	A FEW of the component used appropriate object name with reasonable prefix	5	(__/4) x 5 =
Elements of Swing components	Able to design ALL components in the window form related to the question.	Able to design MOST components in the windows form related to the question.	Able to design SOME components in the windows form related to the question.	Able to design component BUT limited use of component according to the question.	25	(__/4) x 25 =
Working with Panel and layout	Able to create ALL panels and layout correctly according to the questions with additional specifications.	Able to create MOST of the panels and layout correctly according to the questions with correct.	Able to create SOME of the panels and layout correctly according to the questions.	Able to declare a panel only. Layout is not according to the question.	25	(__/4) x 25 =
Program Code	The student creates programs which shows a thorough understanding of the programming concepts and theory. High understanding.	The student creates programs which show considerable understanding of programming concepts and theory. Medium Understanding	The student creates programs which show some understanding of programming concepts and theory. Low Understanding	The student creates programs which show limited understanding of Programming concepts and theory. Very Low Understanding	10	(__/4) x 10 =
Program Compilation and Execution	Able to compile and execute the program with expected output.	Able to compile and execute the programs with unexpected output.	Able to compile the program with minor errors.	Program is not working.	10	(__/4) x 10 =
Output Creativity	Excellent ideas, creative and inventive.	Good ideas, creative and inventive.	Moderate ideas, creative and inventive.	Fairly creative ideas and inventive	10	(__/4) x 10 =
Time	Report is submitted ahead or on time	Reports is one to two days late	Reports is three to four days late	Reports is more than four days late	5	(__/4) x 5 =
<b>TOTAL</b>					100	

\* Zero (0) mark will be given if students do not answer / perform the criteria needed.