DEPARTMENT OF INFORMATION TECHNOLOGY
CENTRE FOR DIPLOMA STUDIES

DAT 20903 PRINCIPLE OF DOT NET PROGRAMMING
PROBLEM BASED TASK

***SERIES NUMBER**	☐ **PBT 1** ☐ **PBT 2** ☑ **PBT 3** ☐ **PBT 4**
TITLE	**INTERACTIVE VB APPLICATION DEVELOPMENT**
QUESTION	**Volume of Geometric Shapes**
DATELINE	
YEAR AND PROGRAM	**2 DAT**
STUDENTS DETAIL	

STUDENT NAME	MATRIX NO	SECTION
1. NUR RASYIDAH BINTI ROSLAN	AA162233	1
2. NUR HIDAYAH BINTI HAMRI	AA160553	1
3. NORSYAZWANIE BINTI NORMAZALI	AA162269	1

TOTAL MARKS	
LECTURER COMMENTS:	

*Notes: 1. *Please tick "√" at the appropriate box*
2. Use blue paper for odd section and pink for even section

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Role of group Member

Member's name	Role
1) NORSYAZWANIE	Complete Phase 1 and Phase 2 (analyze and design)
2) NUR RASYIDAH	Complete Phase 3(Implementation)
3) NUR HIDAYAH	Complete a Report

Phase 1 :Analyze

1.1 List of **input** or data to be entered:

Volume of Cylinder

- Radius
- Height

Volume of Cone

- Radius
- Height

Volume of Pyramid

- Radius
- Height
- Length

1.2 List of desired **output** or results:

- Volume of Cylinder
- Volume of Cone
- Volume of Pyramid

1.3 List of required **process** to obtain the output:

Volume of Cylinder

- 3.142 x radius^2 x height

Volume of Cone

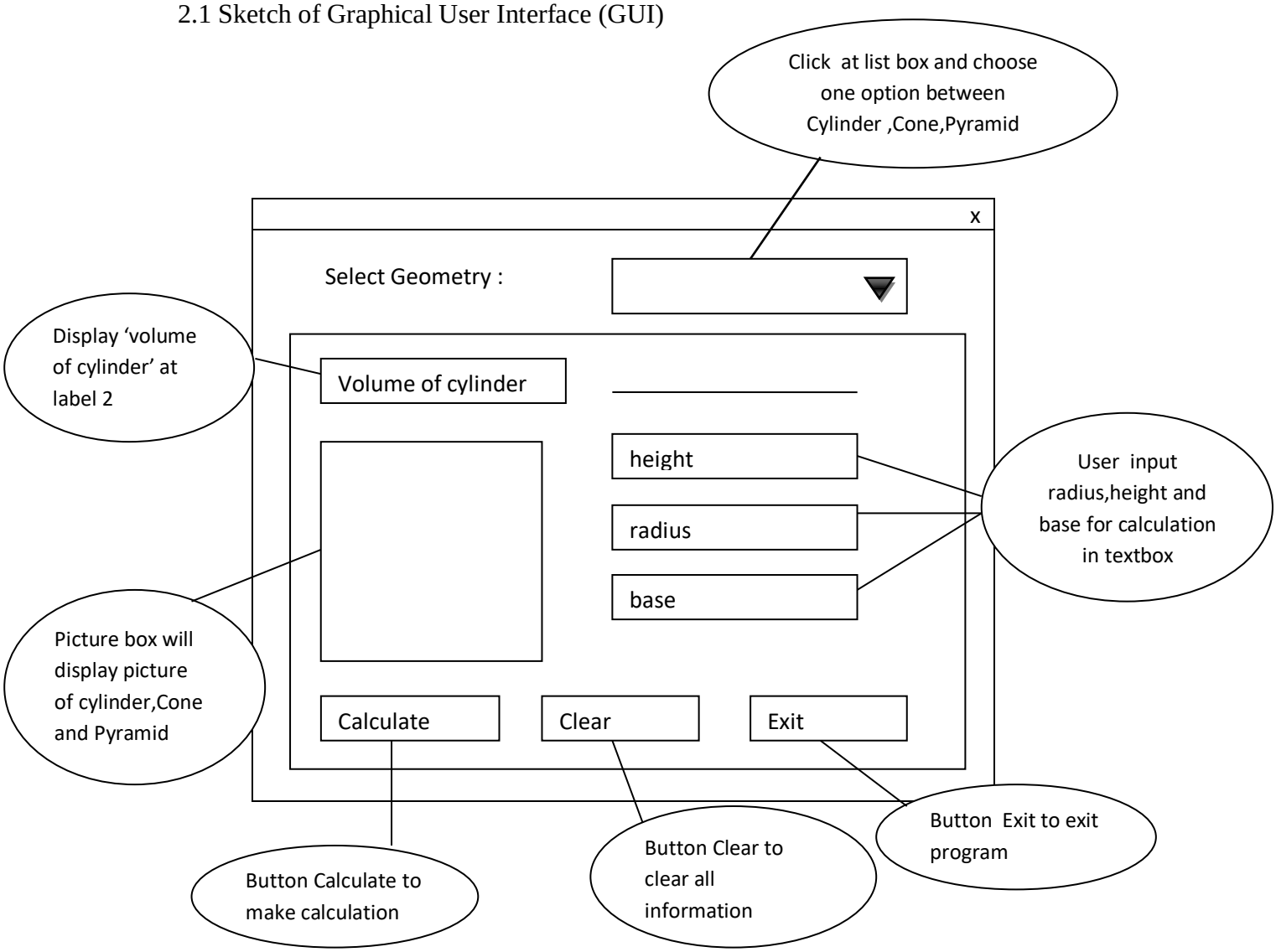
- 3.142 x radius^2 x height /3

Volume of Pyramid

- (Base ^2 x height)/3

Phase 2 : Design

2.1 Sketch of Graphical User Interface (GUI)



2.2 List basic properties of each object used in the GUI

Object	**Properties**
Form 1	Name : frmGeometric
Label 1	Name: lblGeo Text: Select Geometry :
Label 2	Name: lblGeoName Text : Volume of Cylinder/Cone/Pyramid
Label 3	Name:lblJawapan
Combo box	Name: cboGeo
Textbox1	Name: txtheight
Textbox2	Name : txtradius
Textbox3	Name : txtbase
Button 1	Name: btnCal Text: Calculate
Button 2	Name: btnClear Text: Clear
Button 3	Name: btnExit Text: Exit

2.3 Algorithm for each required events as require action to be taken

2.3.1) **In The FrmGeometric** :

2.3.1.1)EventClick For btnCal

Volume of Cylinder

- 3.142 x radius^2 x height

Volume of Cone

- 3.142 x radius^2 x height /3

Volume of Pyramid

- (Base ^2 x height)/3

2.3.1.2) EventClick For btnClear

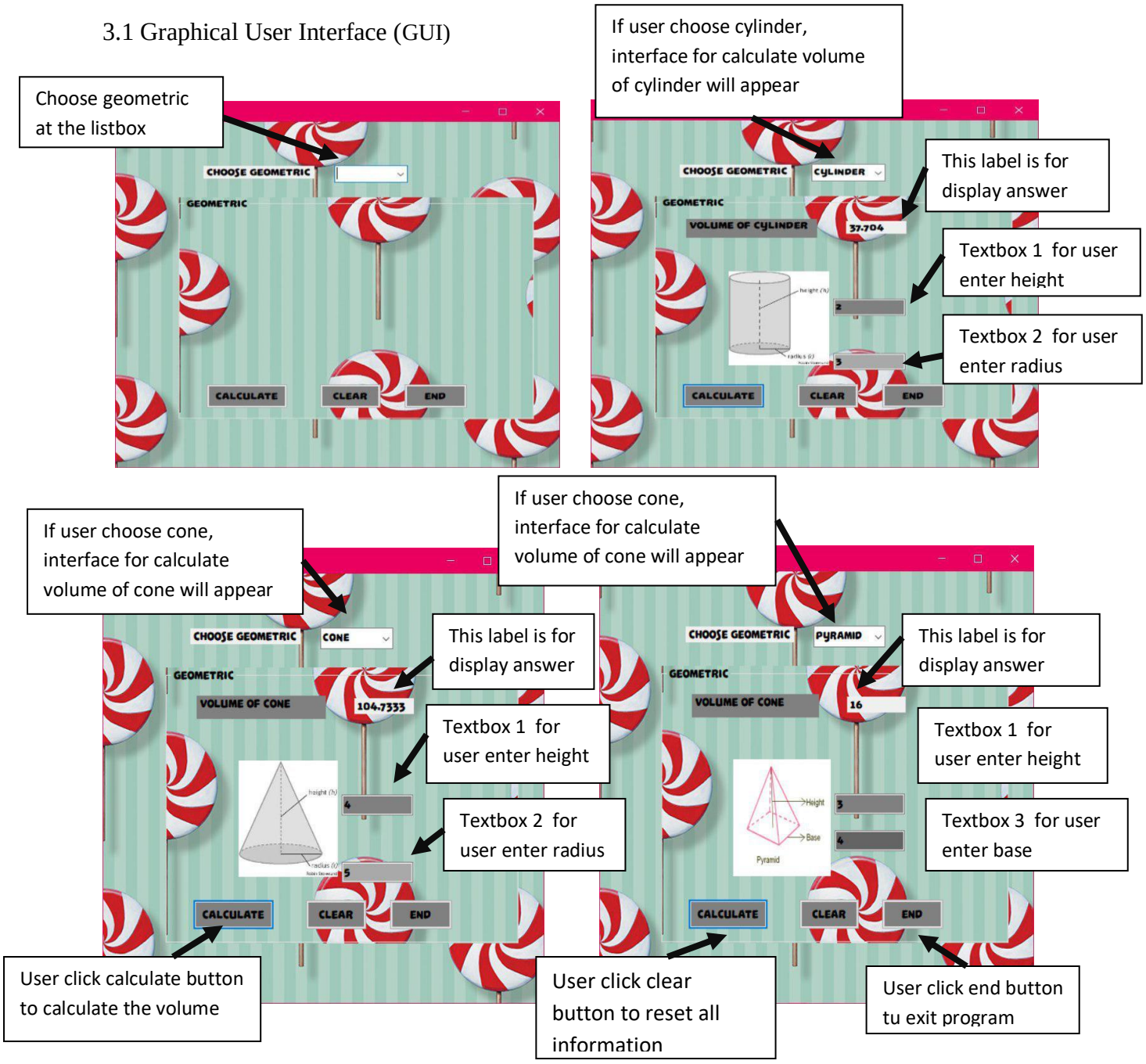
- Clear the calculation using Clear method

2.3.1.3) EventClick For btnExit

- Exit The program using Close method

Phase 3: Implement

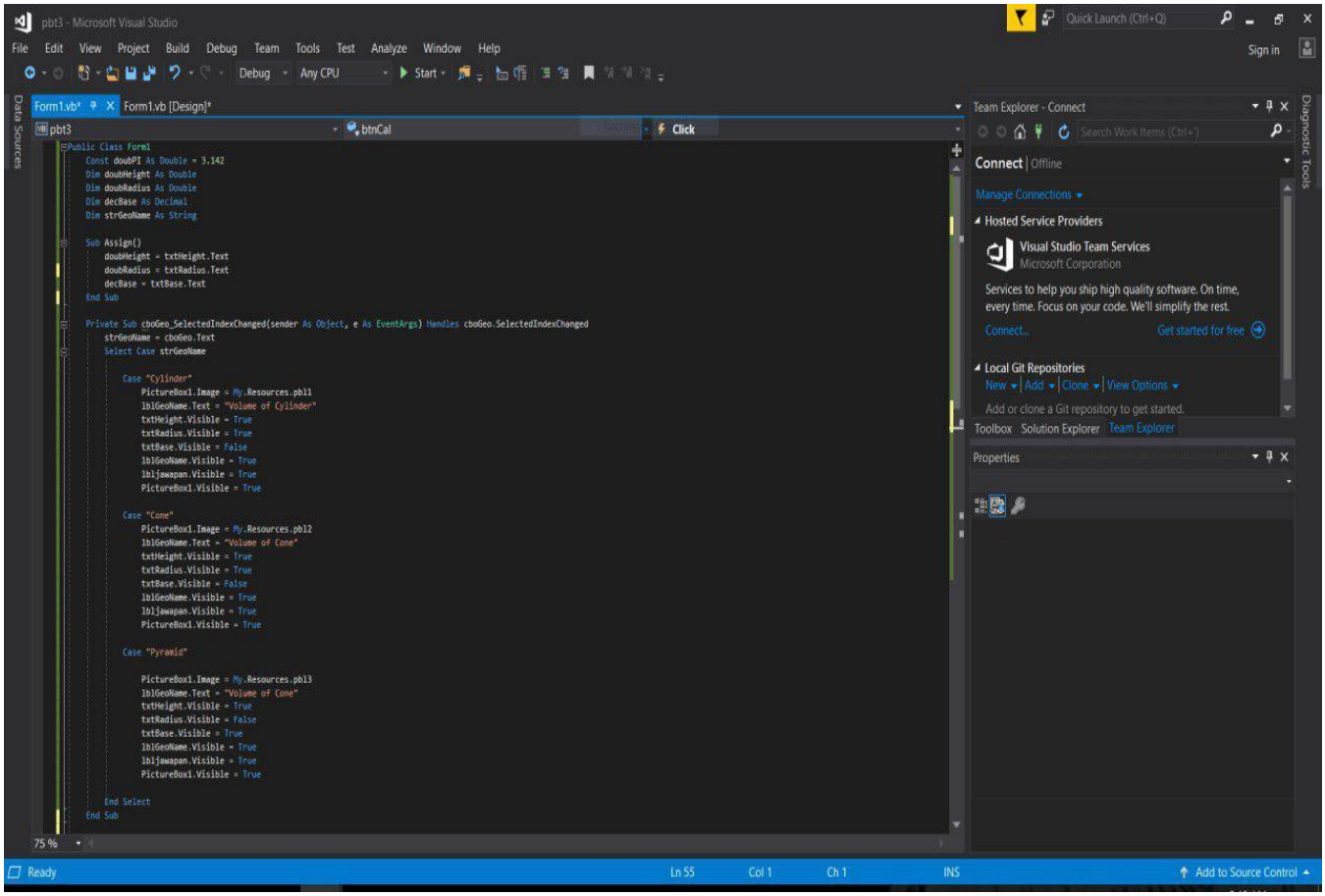
3.1 Graphical User Interface (GUI)

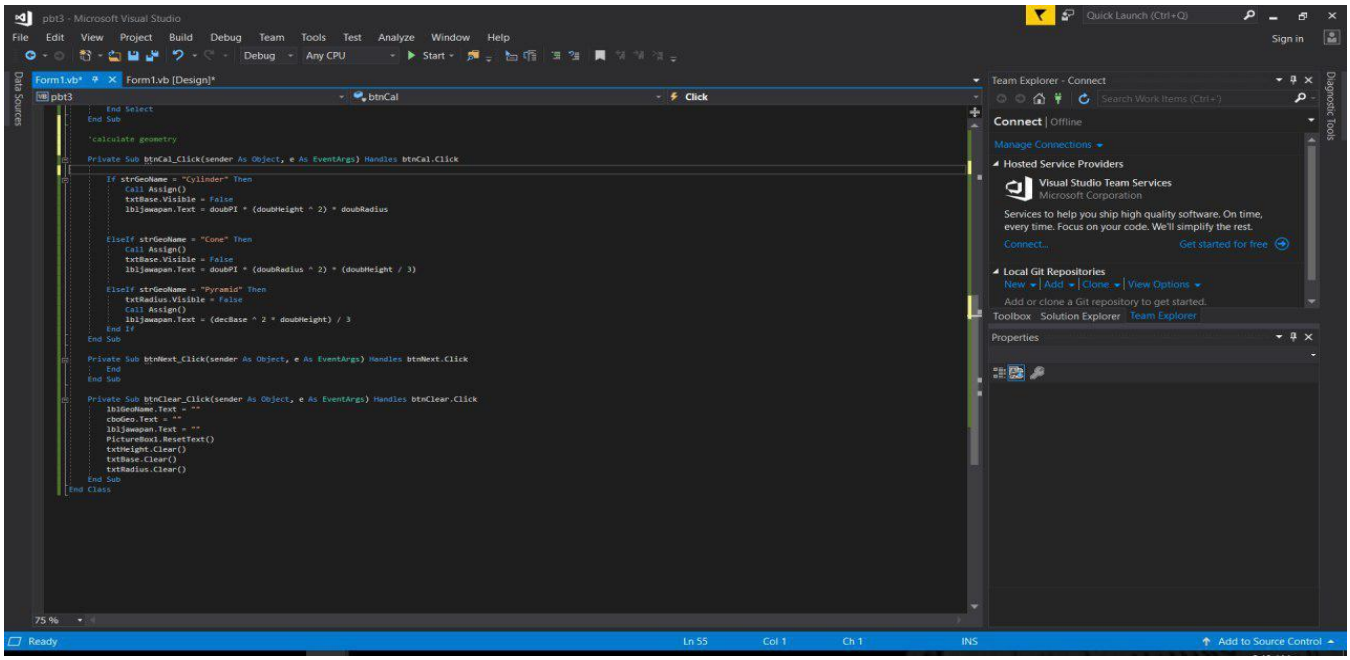


3.2Properties setting of each object used in the GUI

Object	**Properties**	**Setting**
Form 1	Name : Background color:	frmGeo candylollipop
Label 1	Name : Text: Background color:	lblGeo Choose Geometry : Light grey
Label 2	Name: Text: Background color:	lblGeoName Volume of Cylinder/Cone/Pyramid grey
Label 3	Name: Background color:	lblJawapan light grey
Combo box	Name:	cboGeo
Textbox1	Name:	txtHeight
Textbox2	Name:	txtRadius
Textbox3	Name:	txtBase
Button 1	Name: Text: Background color:	Calculate btnCal grey
Button 2	Name: Text: Background color:	Clear btnClear grey
Button 3	Name: Text: Background color	Exit btnExit grey

3.3 Program code to carry out the actions needed by the applications.





Psychomotor Rubric

Criteria	Beginning (1)	Needs improvement (2)	Acceptable (3)	Accomplished (4)	Score
•Ability to **choose suitable controls** for input and output in the GUI which align with the Phase 1 and Phase 2. • **Radio Buttons/ ComboBox/ List Box is used to a user making a choice**.(P1)	Able to accomplish. But, some incorrect or not clear	Able to accomplish correctly but confusing	Able to accomplish correctly and clearly	Able to accomplish extraordinarily	
•Ability to **show descriptive name of object or variables used with correct** prefix conversion (P2)	Able to accomplish. But, some incorrect	Able to accomplish correctly but confusing	Able to accomplish correctly and clearly	Able to accomplish extraordinarily	
• Ability **to respond the suitable event or procedures** with efficient steps (algorithms) in order to get the desire output successfully. • **Calling sub and function procedures** are written efficiently. (P3)	Able to accomplish. But, some incorrect	Able to accomplish correctly but confusing	Able to accomplish correctly and clearly	Able to accomplish extraordinarily	
• Ability to **reproduce a program code** to implement each events **efficiently** and **align with** the **algorithm** written in Phase 2. • **Variable, constants, sub and functions procedure are define** correctly. • **Selection control structure is implemented in the program code** (P3)	Able to accomplish. But, some incorrect	Able to accomplish correctly but confusing	Able to accomplish correctly and clearly	Able to accomplish extraordinarily	
• Ability to **display/construct an interactive program unique and creatively** with user **convenient feature** without any error (P4)	Able to accomplish. But, some incorrect	Able to accomplish correctly but confusing	Able to accomplish correctly and clearly	Able to accomplish extraordinarily	
				Total(20marks)	