

**Central Board of Secondary Education
Informatics Practices (Code 065) for Class XII 2011 Examinations**

Appendix 'A'

Sample Guidelines for GUI Programming

1. To display a message using Label, TextBox, MessageDialog using simple GUI applications
2. To concatenate two text entries and display using simple GUI application
3. To perform a simple arithmetic operation (+,-,*,/) and display the result in MessageDialog or TextBox using simple GUI application
4. To perform simple arithmetic operation (+,-,*,/) and display the result in TextBox using simple GUI application
5. To make simple decision making (if statement) solution and display relevant message using GUI application (Example - Problems related to Eligibility for a given value of Age, "Profit" or "Loss" messages for given values of Cost Price and Sale Price, Grade Display for given values of Marks of students etc.)
6. To create a simple GUI application to perform both arithmetic and logical operation together (Example - Total, Average and Grade calculation for given marks, Salary Calculation on different criteria)
7. To create a simple GUI application to perform an operation based on the criteria input by the user in a CheckBox or a RadioButton.
(Example 1: Find the Discount of an item on the basis of Category of item [Electrical Appliance/Electronic Gadget/Stationary specified using a Radio button] and its Cost [Below 1000/Above 1000/Equal to 1000 specified using a Radio button]).
(Example 2: Calculate the incentive of a Sales Person on the basis of his Sales Amount, Customer Feedback, Count of Customer specified using CheckBox)
[Introduce variable declaration]
8. To create a simple GUI application to change the property of a swing element based on the selection made by the user
(Example 1: To change the background or Foreground color of any of the Swing elements of the form based on the color selected from a list)
(Example 2: To change the foreground and background color of a label based on the values input/stored in a combo box)
9. To store the data(Admission No., Name, Date of Birth, Class and Section) of 10 students in a table [Table] and find total number of students in each class and section.
10. To create a simple GUI application for repeatedly doing a task based on the user input. (Example: To display the multiplication table of a number input by the user)

Sample Guidelines for Connectivity Problems

11. To create a simple GUI application that counts and displays the number of records present in a database table.
12. To create a simple GUI application that displays the records of a database table in a tabular format (using jTable) on the GUI form.
13. To create a simple GUI application that displays the records of a database table in a tabular format (using jTable) on the GUI form based on a criteria input by the user.
14. To create a simple GUI application to perform a calculation based on a value retrieved from database table and a value entered by the user in a GUI application.

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Appendix 'B'

Ready Reference for GUI Programming

Swing Control Methods & Properties

Class	Swing Control	Methods / Properties	
Jbutton	jButton	Methods	<ul style="list-style-type: none"> • getText() • setText()
		Properties	<ul style="list-style-type: none"> • Background • Enabled • Font • Foreground • Text } have same • Label } value(by default)
Jlabel	jLabel	Methods	<ul style="list-style-type: none"> • getText() • setText()
		Properties	<ul style="list-style-type: none"> • Background • Enabled • Font • Foreground • Text
JtextField	jTextField	Methods	<ul style="list-style-type: none"> • getText() • isEditable() • isEnabled() • setText()
		Properties	<ul style="list-style-type: none"> • Background • Editable • Enabled • Font • Foreground • Text

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Class	Swing Control	Methods / Properties	
JRadioButton	jRadioButton	Methods	<ul style="list-style-type: none"> • <code>getText()</code> • <code>setText()</code> • <code>isSelected()</code> • <code>setSelected()</code>
		Properties	<ul style="list-style-type: none"> • Background • Button Group • Enabled • Font • Foreground • Label • Selected • Text
JcheckBox	jCheckBox	Methods	<ul style="list-style-type: none"> • <code>getText()</code> • <code>setText()</code> • <code>isSelected()</code> • <code>setSelected()</code>
		Properties	<ul style="list-style-type: none"> • Button Group • Font • Foreground • Label • Selected • Text
ButtonGroup	jButtonGroup	Properties	<ul style="list-style-type: none"> • Add
JcomboBox	jComboBox	Methods	<ul style="list-style-type: none"> • <code>getSelectedItem()</code> • <code>getSelectedIndex()</code> • <code>setModel()</code>
		Properties	<ul style="list-style-type: none"> • Background • ButtonGroup • Editable • Enabled • Font • Foreground • Model • SelectedIndex • SelectedItem • Text

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Class	Swing Control	Methods / Properties	
Jlist	jList	Methods	<ul style="list-style-type: none"> • <code>getSelectedValue()</code>
		Properties	<ul style="list-style-type: none"> • Background • Enabled • Font • Foreground • Model • SelectedIndex • SelectedItem • SelectionMode • Text
Jtable	jTable	Methods	<ul style="list-style-type: none"> • <code>addRow()</code> • <code>getModel()</code>
		Properties	<ul style="list-style-type: none"> • <code>model</code>
JoptionPane		Methods	<ul style="list-style-type: none"> • <code>showMessageDialog()</code>
DefaultTableModel		Methods	<ul style="list-style-type: none"> • <code>getRowCount()</code> • <code>removeRow()</code> • <code>addRow()</code>

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Commonly used Methods

Class	Methods
Integer	<ul style="list-style-type: none">• <code>parseInt()</code>• <code>toDouble()</code>• <code>toString()</code>
String	<ul style="list-style-type: none">• <code>concat()</code>• <code>length()</code>• <code>substring()</code>• <code>toDouble()</code>• <code>toLowerCase()</code>• <code>toUpperCase()</code>• <code>trim()</code>
Double	<ul style="list-style-type: none">• <code>parseDouble()</code>• <code>toString()</code>• <code>toInt()</code>
Math	<ul style="list-style-type: none">• <code>pow()</code>• <code>round()</code>

Database Connectivity Methods

Class	Methods
Connection	<ul style="list-style-type: none">• <code>createStatement()</code>• <code>close()</code>
DriverManager	<ul style="list-style-type: none">• <code>getConnection()</code>
Statement	<ul style="list-style-type: none">• <code>executeQuery()</code>
ResultSet	<ul style="list-style-type: none">• <code>next()</code>• <code>first()</code>• <code>last()</code>• <code>getString()</code>
Exception	<ul style="list-style-type: none">• <code>getMessage()</code>
System	<ul style="list-style-type: none">• <code>exit()</code>

Note: The visual properties of any of the elements and Data connectivity methods (the properties/methods, which are not highlighted in the above tables) will not be tested in the Theory examination but may be used by the student in the Practicals and in Projects.