AWT COMPONENTS

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JAVA AWT BUTTON :

- A button is basically a control component with a label that generates an event when pushed.
- The **Button** class is used to create a labeled button that has platform independent implementation.
- The application result in some action when the button is pushed.

JAVA AWT BUTTON :

- When we press a button and release it, AWT sends an instance of **ActionEvent** to that button by calling **processEvent** on the button.
- The **processEvent** method of the button receives the all the events, then it passes an action event by calling its own method **processActionEvent**.

JAVA AWT BUTTON :

- To perform an action on a button being pressed and released,
  the **ActionListener** interface needs to be implemented.
- The registered new listener can receive events from the button by
  calling **addActionListener** method of the button.

JAVA AWT BUTTON :

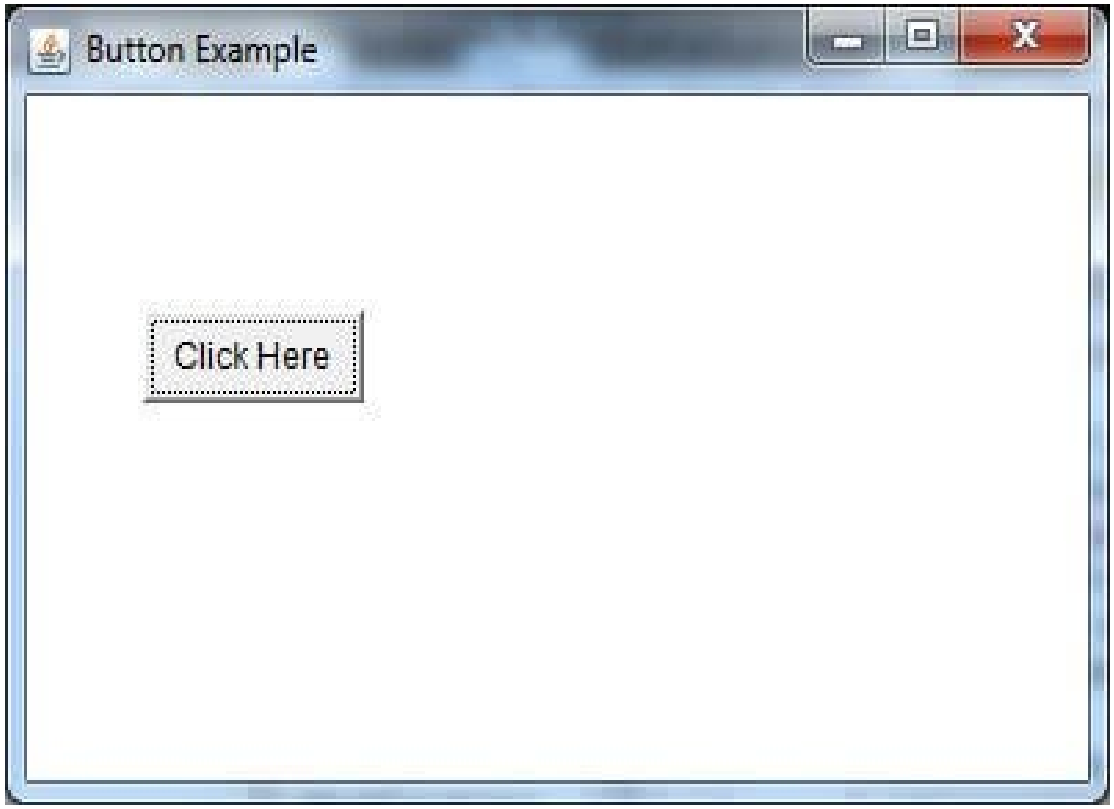
AWT Button Class Declaration

- **public class** Button **extends** Component **implements** Accessible

Button Class Constructors

1. Button( ) It constructs a new button with an empty string i.e. it has no label.
2. Button (String text) It constructs a new button with given string as its label.

JAVA AWT BUTTON :



JAVA AWT LABEL :

- The object of the Label class is a component for placing text in a container.
- It is used to display a single line of **read only text**. The text can be changed by a programmer but a user cannot edit it directly.
- It is called a passive control as it does not create any event when it is accessed. To create a label, we need to create the object of **Label** class.

JAVA AWT LABEL :

AWT Label Class Declaration

- **public class** Label **extends** Component **implements** Accessible

AWT Label Fields

The java.awt.Component class has following fields:

- **static int LEFT:** It specifies that the label should be left justified.
- **static int RIGHT:** It specifies that the label should be right justified.
- **static int CENTER:** It specifies that the label should be placed in center.

JAVA AWT LABEL :

1. Label()It constructs an empty label.
2. Label(String text)It constructs a label with the given string (left justified by default).
3. Label(String text, int alignement)It constructs a label with the specified string and the specified alignment.

JAVA AWT LABEL :

JAVA AWT TEXTFIELD :

- The object of a **TextField** class is a text component that allows a user to enter a single line text and edit it.
- It inherits **TextComponent** class, which further inherits **Component** class.
- When we enter a key in the text field (like key pressed, key released or key typed), the event is sent to **TextField**. Then the **KeyEvent** is passed to the registered **KeyListener**.
- It can also be done using **ActionEvent**; if the ActionEvent is enabled on the text field, then the ActionEvent may be fired by pressing return key. The event is handled by the **ActionListener** interface.

JAVA AWT TEXTFIELD :

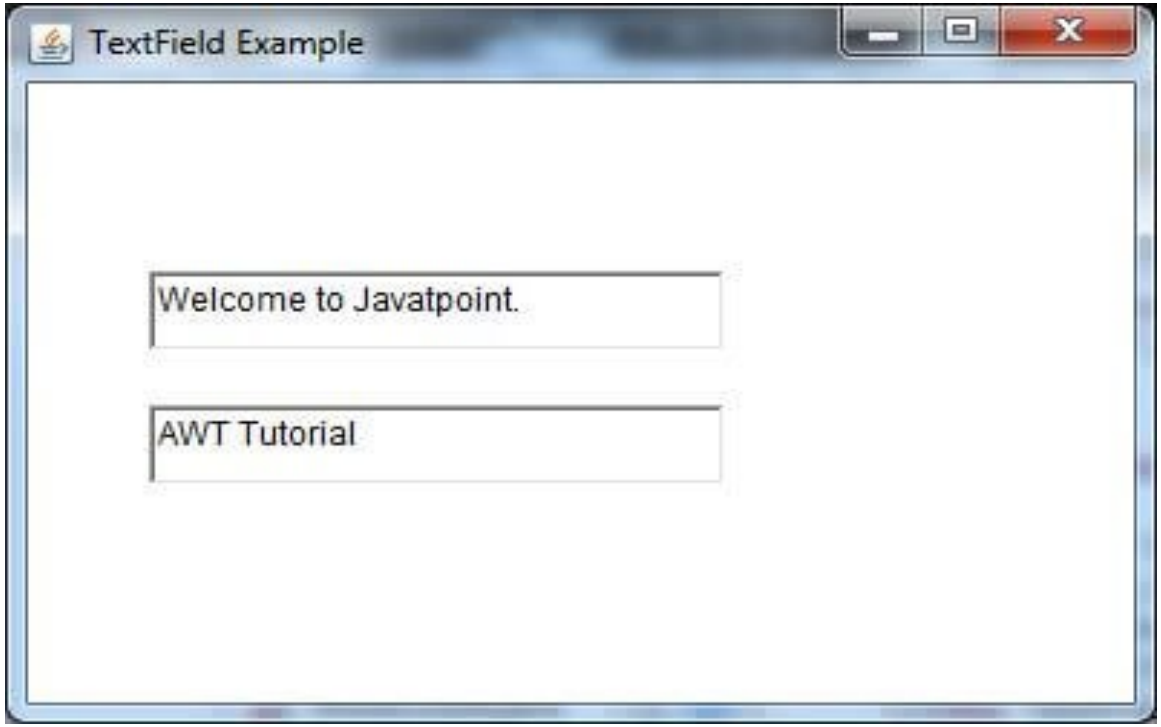
AWT TextField Class Declaration

- **public class** TextField **extends** TextComponent

TextField Class constructors

1. TextField()It constructs a new text field component.
2. TextField(String text)It constructs a new text field initialized with the given string text to be displayed.
3. TextField(int columns)It constructs a new textfield (empty) with given number of columns.
4. TextField(String text, int columns)It constructs a new text field with the given text and given number of columns (width).

JAVA AWT TEXTFIELD :



JAVA AWT TEXTAREA :

- The object of a TextArea class is a multiline region that displays text. It allows the editing of multiple line text. It inherits TextComponent class.
- The text area allows us to type as much text as we want. When the text in the text area becomes larger than the viewable area, the scroll bar appears automatically which helps us to scroll the text up and down, or right and left.

JAVA AWT TEXTAREA :

AWT TextArea Class Declaration

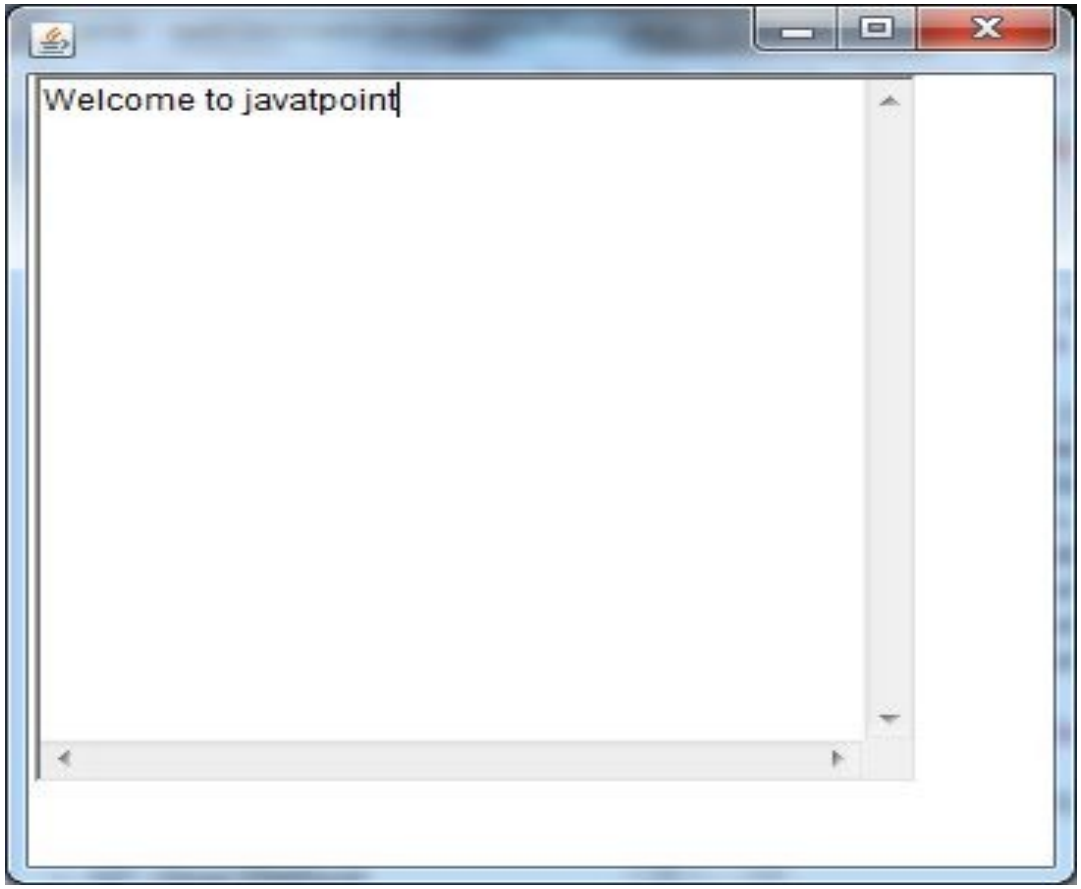
- **public class** TextArea **extends** TextComponent

Fields of TextArea Class

The fields of java.awt.TextArea class are as follows:

- **static int SCROLLBARS_BOTH** - It creates and displays both horizontal and vertical scrollbars.
- **static int SCROLLBARS_HORIZONTAL_ONLY** - It creates and displays only the horizontal scrollbar.
- **static int SCROLLBARS_VERTICAL_ONLY** - It creates and displays only the vertical scrollbar.
- **static int SCROLLBARS_NONE** - It doesn't create or display any scrollbar in the text area.

JAVA AWT TEXTAREA :



JAVA AWT CHECKBOX :

- The Checkbox class is used to create a checkbox. It is used to turn an option on (true) or off (false).
- Clicking on a Checkbox changes its state from "on" to "off" or from "off" to "on".

AWT Checkbox Class Declaration

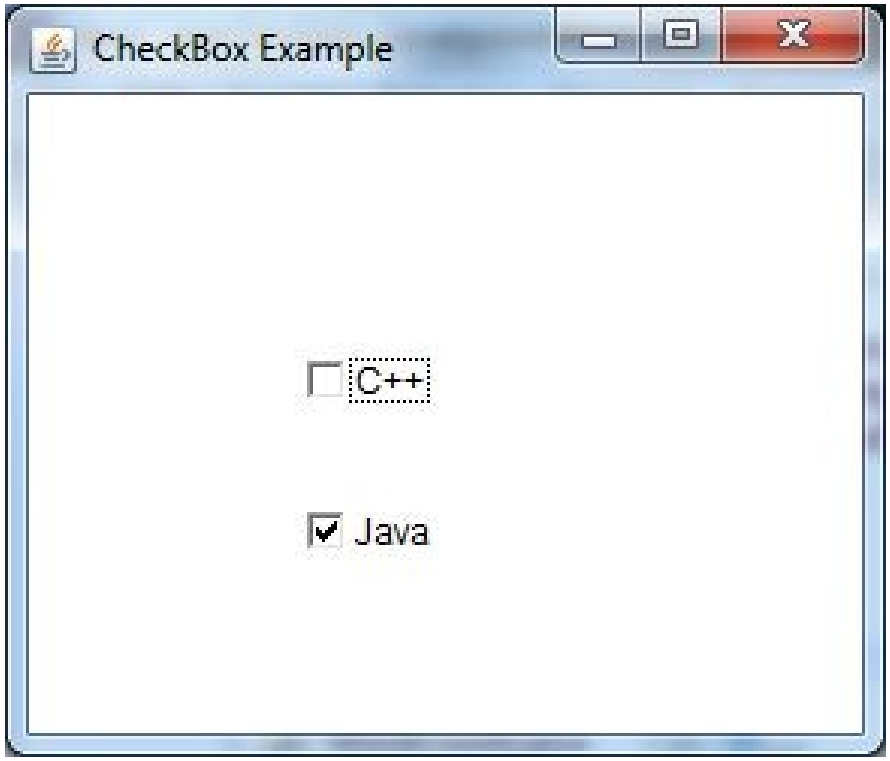
- **public class** Checkbox **extends** Component **implements** ItemSelectable, Accessible

JAVA AWT CHECKBOX :

Checkbox Class Constructors :

1. Checkbox()It constructs a checkbox with no string as the label.
2. Checkbox(String label)It constructs a checkbox with the given label.
3. Checkbox(String label, boolean state)It constructs a checkbox with the given label and sets the given state.

JAVA AWT CHECKBOX :



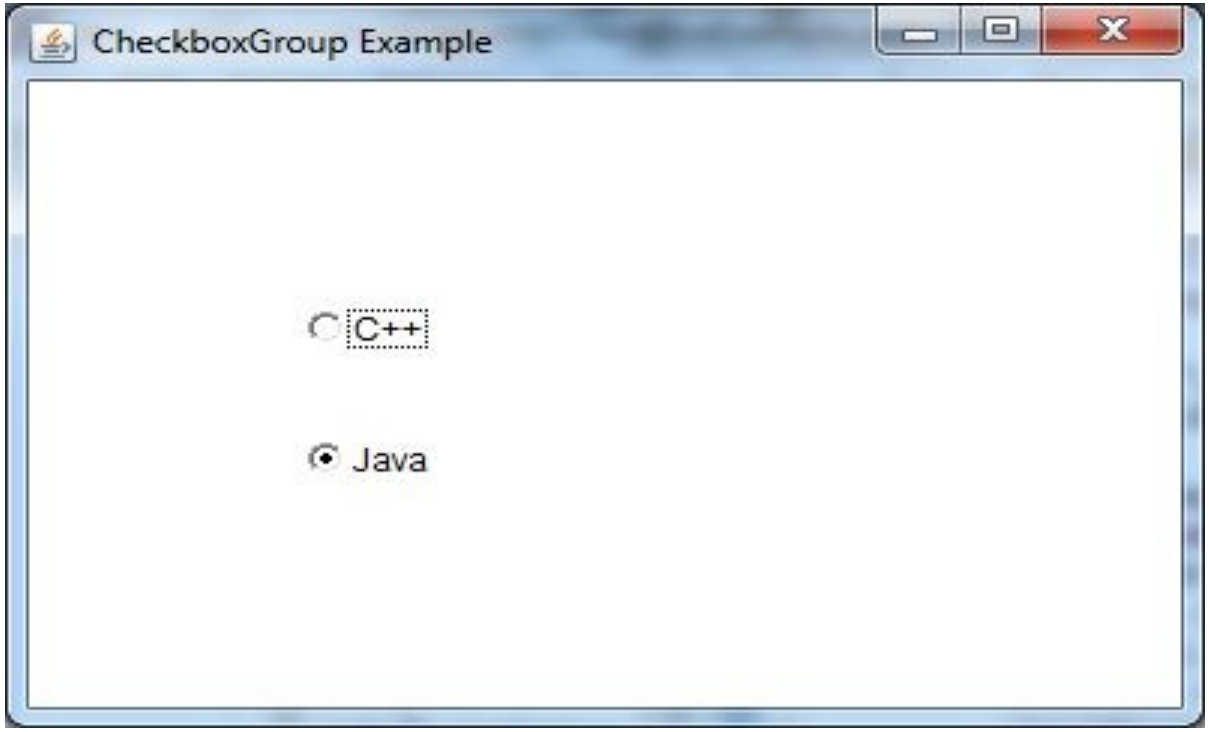
JAVA AWT CHECKBOXGROUP :

- The object of CheckboxGroup class is used to group together a set of Checkbox.
- At a time only one check box button is allowed to be in "on" state and remaining check box button in "off" state. It inherits the object class.

AWT CheckboxGroup Class Declaration

- **public class** CheckboxGroup **extends** Object **implements** Serializable

JAVA AWT CHECKBOXGROUP :



JAVA AWT CHOICE :

- The object of Choice class is used to show popup menu of choices.
- Choice selected by user is shown on the top of a menu. It inherits Component class.

AWT Choice Class Declaration

- **public class** Choice **extends** Component **implements** ItemSelectable, Accessible

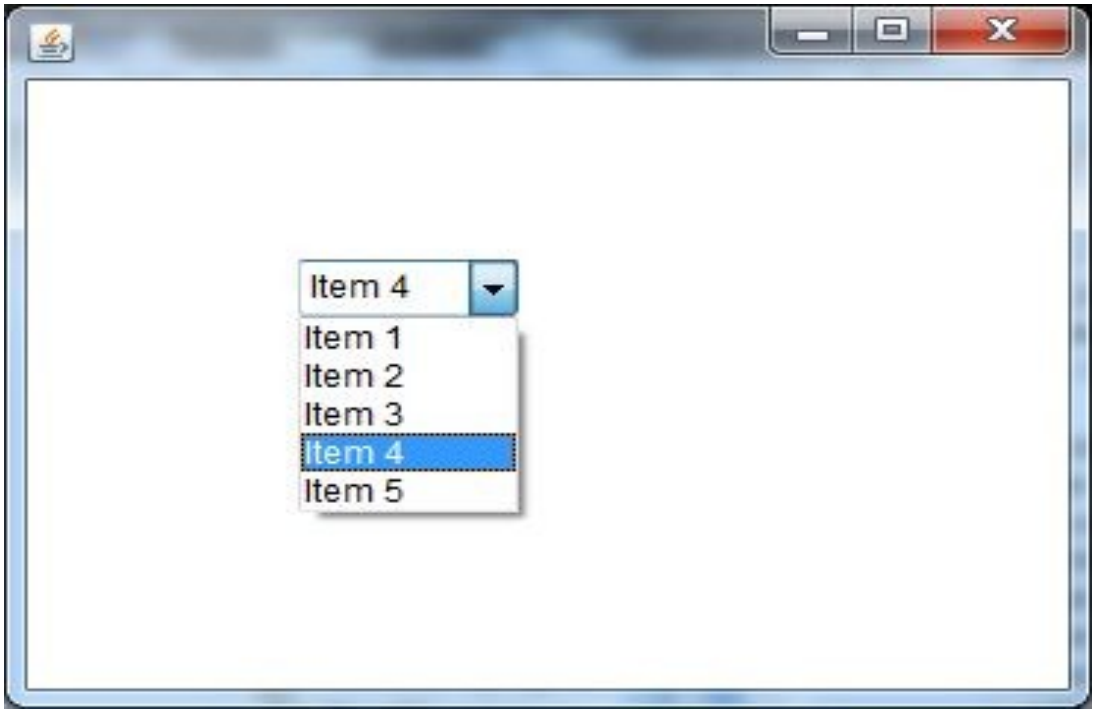
JAVA AWT CHOICE :

Choice Class constructor

Choice()

It constructs a new choice menu.

JAVA AWT CHOICE :



JAVA AWT LIST :

- The object of List class represents a list of text items.
- With the help of the List class, user can choose either one item or multiple items. It inherits the Component class.

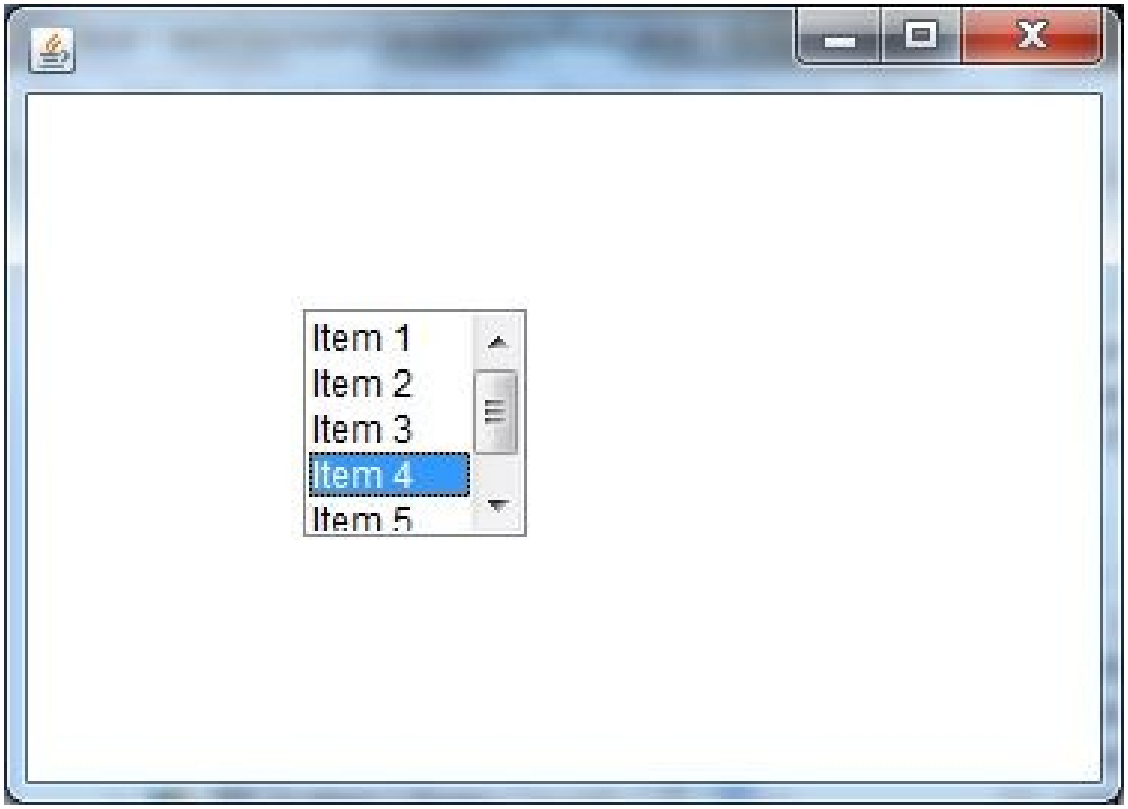
AWT List class Declaration

- **public class** List **extends** Component **implements** ItemSelectable, Accessible

AWT LIST CLASS CONSTRUCTORS :

1.	**List()**	It constructs a new scrolling list.
2.	**List(int row_num)**	It constructs a new scrolling list initialized with the given number of rows visible.
3.	**List(int row_num, Boolean multipleMode)**	It constructs a new scrolling list initialized which displays the given number of rows.

JAVA AWT LIST :

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