

Android - Widgets

- Application to demonstrate the available widgets in Android which enhance the UI experience
- The application demonstrates only the visual representation and not the associated callbacks.
- Android widgets are available in the package `android.widget.*`
- In this example, the widgets are implemented using layout XML - `res/layout/main.xml` (it can be implemented programmatically)

- `ScrollView`
 - Enables user to scroll, where the view is larger than the physical display
 - Should contain a child which contains the contents that need to be scrolled
- `TextView`
 - Used to display any text to the user
- `Button`
 - Implements a simple button which can be pressed or clicked upon
 - The image of the button can be customized based on the various states of the button using state list drawable
- `EditText`
 - Subclass of `TextView` with editing capabilities

- `CheckBox`
 - Based on the 2 states - checked/unchecked, necessary actions can be taken
- `RadioGroup`
 - Used to create a scope for set of radio buttons
 - When one of the radio button within this scope is checked, the rest are unchecked
 - The `RadioGroup` can be cleared to remove the checked state of the radio button.
- `RadioButton`
 - Has two states - checked/unchecked
 - The radio button cannot be unchecked. This can be achieved by clearing the `RadioGroup` instead
- `ToggleButton`
 - Is used to render the on/off states like a switch

- RatingBar
 - Used to indicate the rating using the stars.
 - The rating bar can be set to read only if required.
 - A listener can be set to handle the change in the ratings.
- AnalogClock
 - Displays the time in form of analogic clock
- DigitalClock
 - Displays time digitally with seconds
- TimePicker
 - Is used to enable user to select the time from 24 hour or AM/PM mode.

- `DatePicker`

- Is used to select a date.
- The user can select the year, month and day.
- It can be customized such that the user is constrained to select between a range of dates.
- The `DatePicker` can be initialized with an initial by passing the year, month, date and a listener when the date value is changed to `init()`

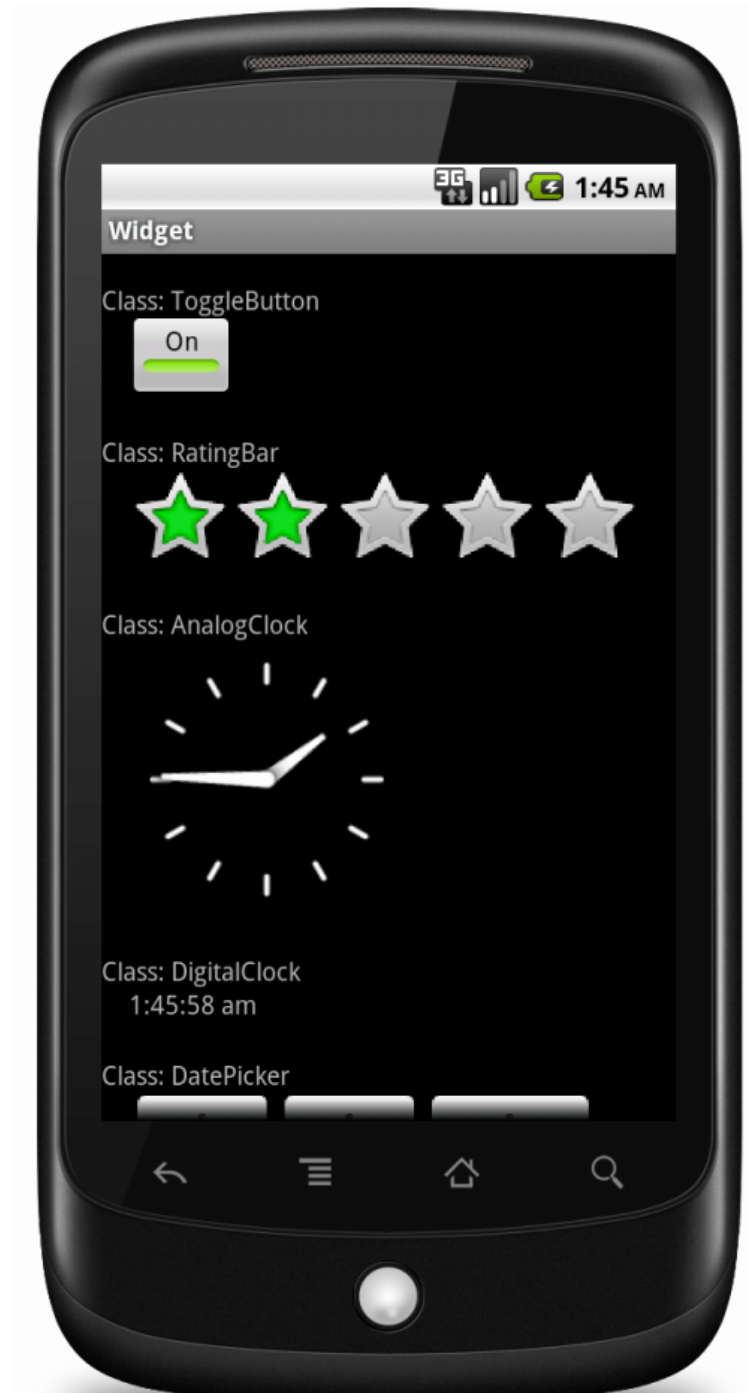
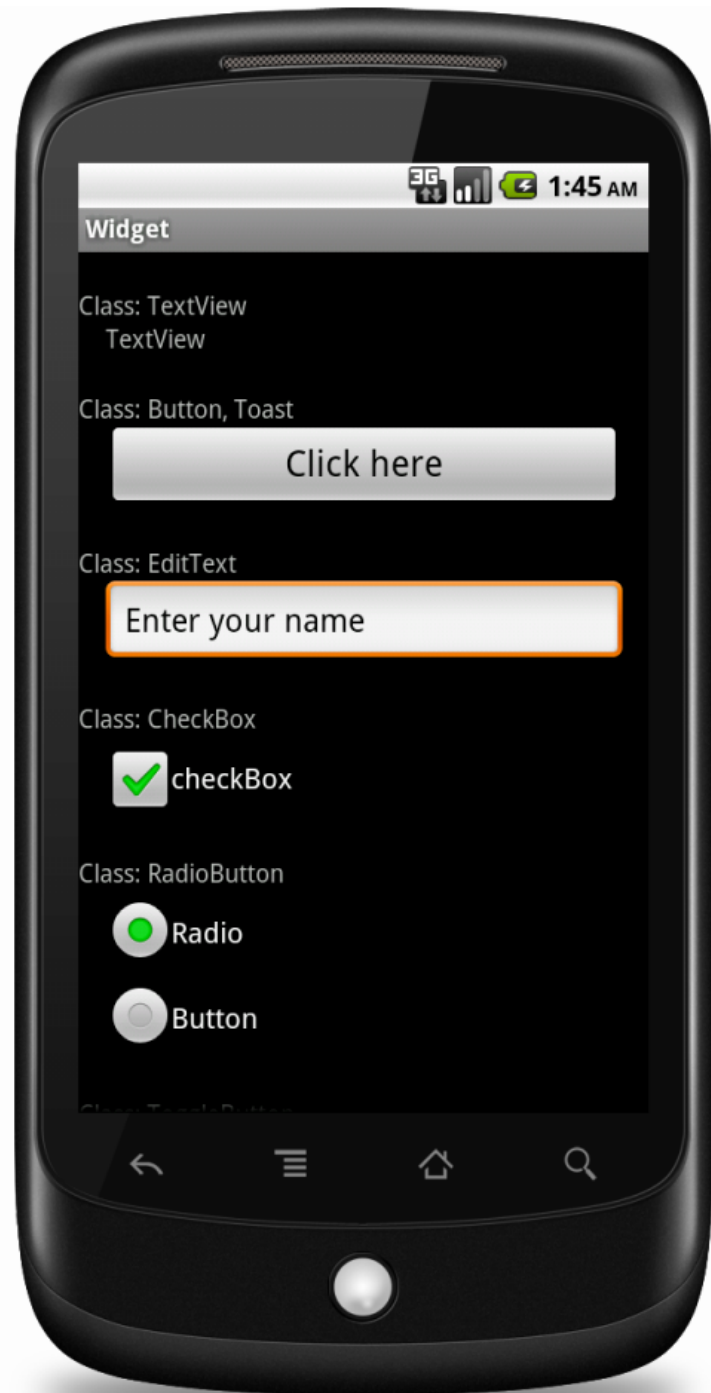
- `ProgressBar`

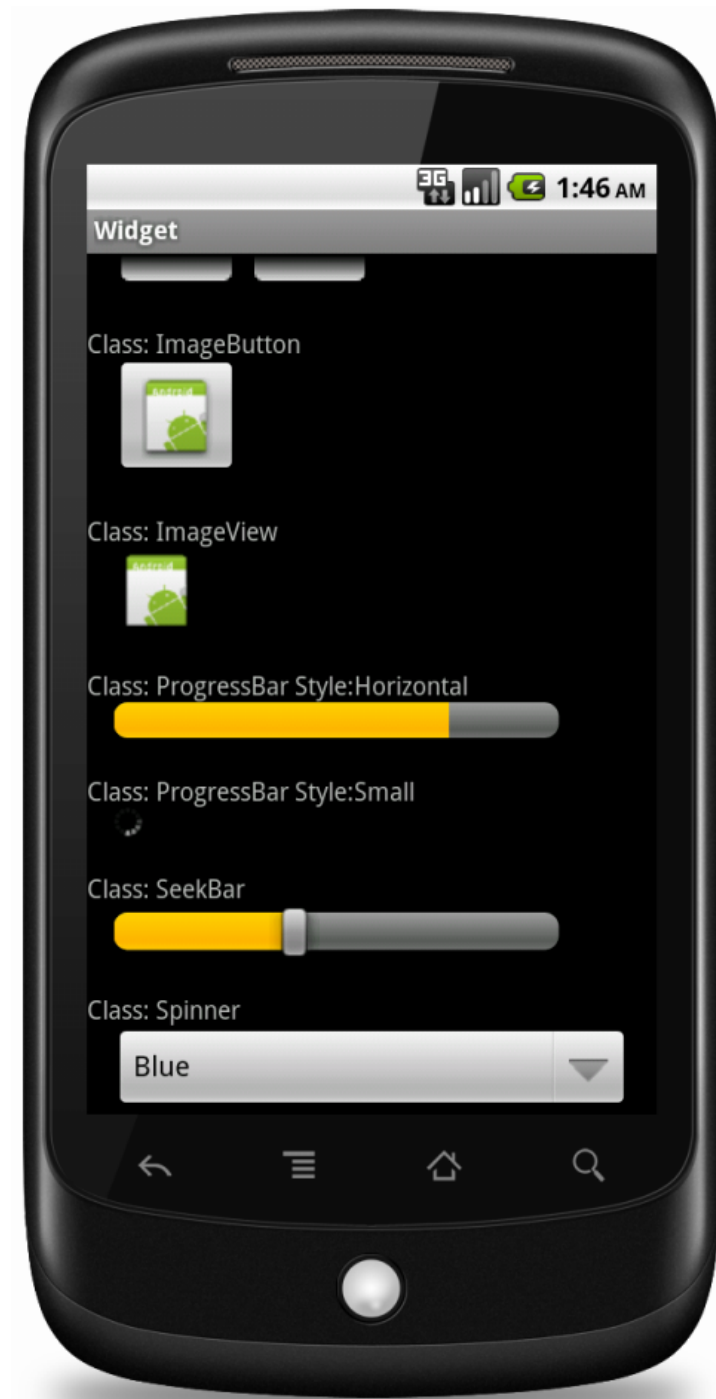
- Is used to indicate the progress of any on-going operation. The progress displayed on the bar can be controlled by the application.
- The indeterminate indicator can be used to indicate the progress when the time taken for the operation is not known.

- SeekBar
 - Is similar to progress bar but it has a draggable element which the user can use to drag.
- Toast
 - Is used to notify user.
 - It remains visible only for specified period of time and disappears automatically.
- ImageButton
 - Renders a button with an image.
 - The image is defined using `android:src` (if using xml) or `setImageResource()` (programmatically)

- Spinner

- Is like a drop down list which enables user to select from a list of items.
- The list of strings that should be displayed in the selection dialog is defined in `res/values/strings.xml`
- Each item in the string array(defined in `strings.xml`) is bound with initial appearance and an `ArrayAdapter` is created using `createFromResource()` which is required to set the data.





References

- [Android Widgets](#)
- [ScrollView](#)
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- [CheckBox](#)
- [RadioGroup](#)
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Exercise

- Nothing to do!