Android - Sound

- The application demonstrates the use of `MediaPlayer`
- A button allows the user to start and stop the media playback
- A switch allows the user to enable/disable the looping of playback

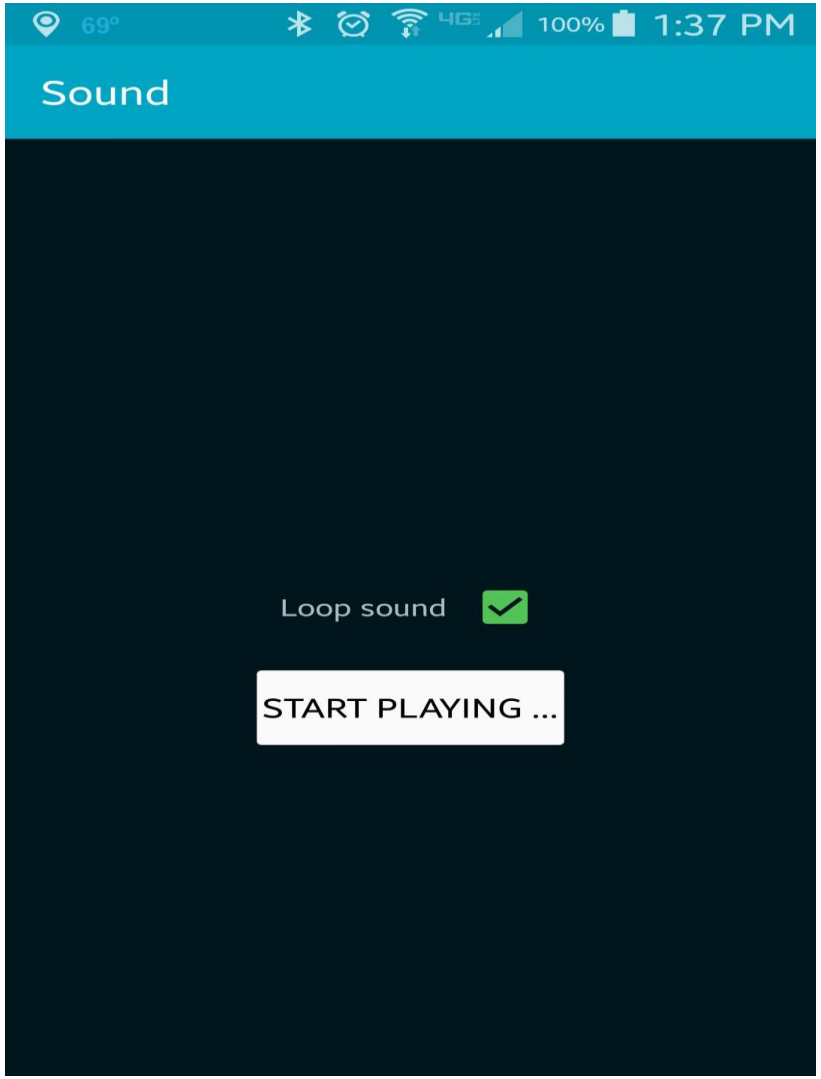
- The switch is implemented using the `ToggleButton` widget provided by Android
- When `ToggleButton` is:
    - on - enable looping
    - off - disable looping

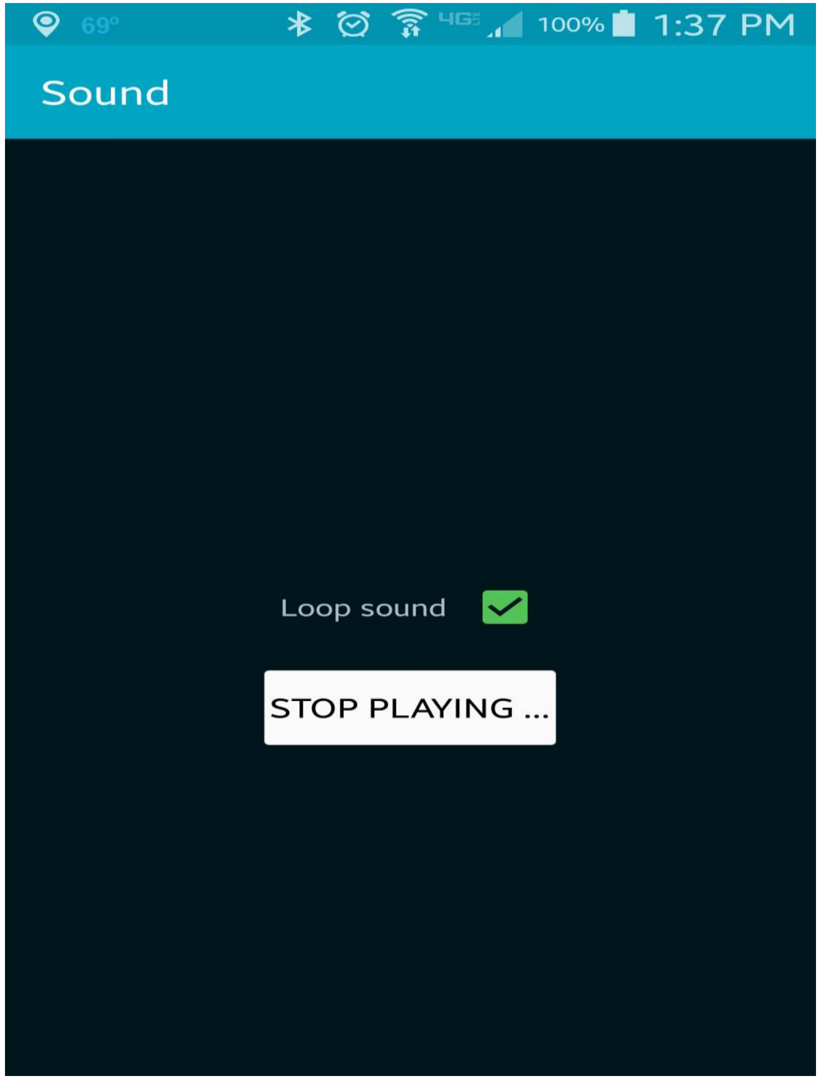
- `MediaPlayer` can support several sources.
- Here, local resource is used as source for playback
    - Placed in `res/raw` directory
    - Referenced using `resourceID`

- The `MediaPlayer` has various states:
  - When the MediaPlayer is created using `new()` the object is in '*idle*' state
  - The `MediaPlayer` has to be in '*prepared*' state before it is 'started'
    - using `prepare()`
  - When the `MediaPlayer` is created using `create()` the object is already '*prepared*'
    - Do not call `prepare()` explicitly
  - `MediaPlayer` enters '*Stopped*' state by calling `stop()`
  - `MediaPlayer` enters '*PlaybackCompleted*' state when `OnCompletion()` is invoked and looping is not enabled

- When playback reaches end of the stream,
  - If looping is enabled, the `MediaPlayer` is still in 'started' state
  - If looping is not enabled, then callback method `onCompletion()` is invoked
    - Registered using `setOnCompletionListener()`

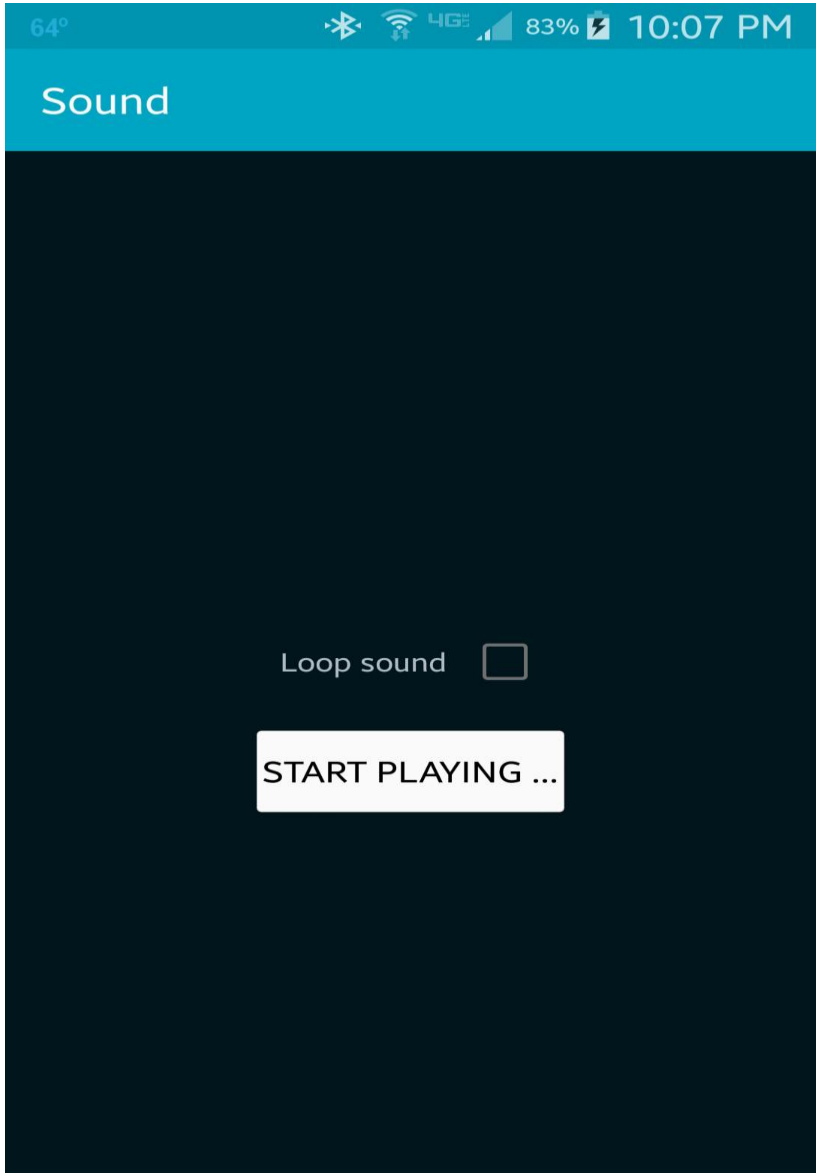
- The button provided helps user to start and stop the playback
- The switch provided helps used to enable/disable the looping





- When the playback has reached end of stream, if the looping is not enabled, the state of button changes accordingly.

- The `MediaPlayer` and the resources the object is holding has to be released once we are done using it
- Proper handling of resources (releasing the resources) `onPause()` has to be done (not implemented in this example)



References

- MediaPlayer
- ToggleButton

Exercise

- Add an (arbitrary) MP3 file as a resource to the project (i.e., your favorite song).
- Add another button to the UI “Play MP3” that will play the MP3 file when pressed.