Emoticon models an emoticon with a name and an image.

Emoticon
- name: String
- image: Drawable
+ Emoticon(name: String, image: Drawable)
+ getName(): String
+ getImage(): Drawable

Drawable

14 ... 1 ... *

records timestamp of

EmoticonHistory tracks a timestamped history of Emoticon records.

EmoticonHistory
- history: List<Pair<Emoticon, LocalDateTime>>
+ EmoticonHistory()
+ record(emoticon: Emoticon)
+ getHistoryAsArray(): List<Pair<Emoticon, LocalDateTime>>

LocalDateTime

records count of

EmoticonCounter
- frequencyMap: HashMap<Emoticon, Integer>
+ EmoticonCounter()
+ addCount(emoticon: Emoticon)
+ getCount(emoticon: Emoticon): Integer
+ getTotalCount(): Integer
+ getCountAsArray(): List<Entry<Emoticon, Integer>>

EmoticonCounter tracks and manages the frequency of unique Emoticon objects.

ArrayAdapter<LocalDate>

LocalDateAdapter
+ LocalDateAdapter(context: Context, dates: List<LocalDate>)
+ getView(position: Integer, convertView: View, parent: ViewGroup): View
+ getDropDownView(position: Integer, convertView: View, parent: ViewGroup): View

ArrayAdapter<Emoticon>

EmoticonArrayAdapter
+ EmoticonArrayAdapter(context: Context, emoticons: List<Emoticon>)
+ getView(position: Integer, convertView: View, parent: ViewGroup): View

ArrayAdapter<Entry<Emoticon, Integer>>

EmoticonCountArrayAdapter
+ EmoticonCountArrayAdapter(context: Context, frequencyMap: List<Entry<Emoticon, Integer>>)
+ getView(position: Integer, convertView: View, parent: ViewGroup): View

ArrayAdapter<Pair<Emoticon, LocalDateTime>>

EmoticonHistoryArrayAdapter
+ EmoticonHistoryArrayAdapter(context: Context, history: List<Pair<Emoticon, LocalDateTime>>)
+ getView(position: Integer, convertView: View, parent: ViewGroup): View

EmoticonDailyLogger tracks Emoticon usage using EmoticonCounter and EmoticonHistory to record counts and timestamps.

EmoticonDailyLogger
- counter: EmoticonCounter
- history: EmoticonHistory
+ EmoticonDailyLogger()
+ recordEmoticon(emoticon: Emoticon)
+ getCount(emoticon: Emoticon): Integer
+ getTotalCount(): Integer
+ getCountAsArray(): List<Entry<Emoticon, Integer>>
+ getHistoryAsArray(): List<Pair<Emoticon, LocalDateTime>>

<<interface>>
AddEmoticonDialogListener
~ addEmoticon(emoticon: Emoticon)

DialogFragment

Fragment

Fragment

EmoticonLogger tracks daily EmoticonDailyLogger records, organizing emoticon usage by date.

EmoticonLogger
- logger: HashMap<LocalDate, EmoticonDailyLogger>
+ EmoticonLogger()
+ recordEmoticon(emoticon: Emoticon)
+ recordEmoticon(emoticon: Emoticon, date: LocalDate)
+ getDatesAsArray(): List<LocalDate>
+ getDailyLogger(date: LocalDate): EmoticonDailyLogger

AddEmoticonDialogFragment
- listener: AddEmoticonDialogListener
- emoticonArrayList: List<Emoticon>
- emoticonArrayAdapter: EmoticonArrayAdapter
- addEmoticonGridView: GridView
+ newInstance(availableEmoticons: List<Emoticon>): AddEmoticonDialogFragment
+ onAttach(context: Context)
+ onCreateView(inflater: LayoutInflater, container: ViewGroup, savedInstanceState: Bundle): View
+ onViewCreated(view: View, savedInstanceState: Bundle)

DailySummaryFragment
- summaryBackButton: ImageButton
- summaryDateSpinner: Spinner
- summaryListView: ListView
- summaryTotalCountTextView: TextView
- logger: EmoticonLogger
- localDateAdapter: LocalDateAdapter
- countArrayAdapter: EmoticonCountArrayAdapter
+ newInstance(logger: EmoticonLogger): DailySummaryFragment
+ onCreateView(inflater: LayoutInflater, container: ViewGroup, savedInstanceState: Bundle): View
+ onViewCreated(view: View, savedInstanceState: Bundle)
+ updateOnSelectedDate(selectedDate: LocalDate)

HistoryFragment
- historyBackButton: ImageButton
- historyDateSpinner: Spinner
- historyListView: ListView
- logger: EmoticonLogger
- localDateAdapter: LocalDateAdapter
- historyArrayAdapter: EmoticonHistoryArrayAdapter
+ newInstance(logger: EmoticonLogger): HistoryFragment
+ onCreateView(inflater: LayoutInflater, container: ViewGroup, savedInstanceState: Bundle): View
+ onViewCreated(view: View, savedInstanceState: Bundle)
+ updateOnSelectedDate(selectedDate: LocalDate)

shows

AppCompatActivity

logs user emoticon activity to

shows

shows

MainActivity
- numGridRows: Integer
- numGridCol: Integer
- selectedRow: Integer
- selectedCol: Integer
- emoticonGridArray: Emoticon[][]
- emoticonGridlayout: GridLayout
- editButton: Button
- confirmButton: Button
- dailySummaryButton: Button
- historyButton: Button
- mainMessageTextview: TextView
- editMode: Boolean
- availableEmoticonArrayList: ArrayList<Emoticon>
- logger: EmoticonLogger
onCreateView(savedInstanceState: Bundle)
+ renderMainActivity()
+ deleteEmoticonGridArray(rowIndex: Integer, colIndex: Integer)
+ addEmoticonGridArray(rowIndex: Integer, colIndex: Integer)
+ addEmoticon(emoticon: Emoticon)
+ recordEmoticonGridArray(rowIndex: Integer, colIndex: Integer)