// Adapter class for recycler view

 public class SimpleAdapter extends RecyclerView**.**Adapter**<**SimpleAdapter**.**VerticalItemHolder**>** **{**

 private ArrayList**<**ReminderItem**>** mItems**;**

 public SimpleAdapter**()** **{**

 mItems **=** new ArrayList**<>();**

 **}**

 public void setItemCount**(**int count**)** **{**

 mItems**.**clear**();**

 mItems**.**addAll**(**generateData**(**count**));**

 notifyDataSetChanged**();**

 **}**

 public void onDeleteItem**(**int count**)** **{**

 mItems**.**clear**();**

 mItems**.**addAll**(**generateData**(**count**));**

 **}**

 public void removeItemSelected**(**int selected**)** **{**

 if **(**mItems**.**isEmpty**())** return**;**

 mItems**.**remove**(**selected**);**

 notifyItemRemoved**(**selected**);**

 **}**

 // View holder for recycler view items

 @Override

 public VerticalItemHolder onCreateViewHolder**(**ViewGroup container**,** int viewType**)** **{**

 LayoutInflater inflater **=** LayoutInflater**.**from**(**container**.**getContext**());**

 View root **=** inflater**.**inflate**(**R**.**layout**.**recycle\_items**,** container**,** false**);**

 return new VerticalItemHolder**(**root**,** this**);**

 **}**

 @Override

 public void onBindViewHolder**(**VerticalItemHolder itemHolder**,** int position**)** **{**

 ReminderItem item **=** mItems**.**get**(**position**);**

 itemHolder**.**setReminderTitle**(**item**.**mTitle**);**

 itemHolder**.**setReminderDateTime**(**item**.**mDateTime**);**

 itemHolder**.**setReminderRepeatInfo**(**item**.**mRepeat**,** item**.**mRepeatNo**,** item**.**mRepeatType**);**

 itemHolder**.**setActiveImage**(**item**.**mActive**);**

 **}**

 @Override

 public int getItemCount**()** **{**

 return mItems**.**size**();**

 **}**

 // Class for recycler view items

 public class ReminderItem **{**

 public String mTitle**;**

 public String mDateTime**;**

 public String mRepeat**;**

 public String mRepeatNo**;**

 public String mRepeatType**;**

 public String mActive**;**

 public ReminderItem**(**String Title**,** String DateTime**,** String Repeat**,** String RepeatNo**,** String RepeatType**,** String Active**)** **{**

 this**.**mTitle **=** Title**;**

 this**.**mDateTime **=** DateTime**;**

 this**.**mRepeat **=** Repeat**;**

 this**.**mRepeatNo **=** RepeatNo**;**

 this**.**mRepeatType **=** RepeatType**;**

 this**.**mActive **=** Active**;**

 **}**

 **}**

 // Class to compare date and time so that items are sorted in ascending order

 public class DateTimeComparator implements Comparator **{**

 DateFormat f **=** new SimpleDateFormat**(**"dd/mm/yyyy hh:mm"**);**

 public int compare**(**Object a**,** Object b**)** **{**

 String o1 **=** **((**DateTimeSorter**)**a**).**getDateTime**();**

 String o2 **=** **((**DateTimeSorter**)**b**).**getDateTime**();**

 try **{**

 return f**.**parse**(**o1**).**compareTo**(**f**.**parse**(**o2**));**

 **}** catch **(**ParseException e**)** **{**

 throw new IllegalArgumentException**(**e**);**

 **}**

 **}**

 **}**

 // UI and data class for recycler view items

 public class VerticalItemHolder extends SwappingHolder

 implements View**.**OnClickListener**,** View**.**OnLongClickListener **{**

 private TextView mTitleText**,** mDateAndTimeText**,** mRepeatInfoText**;**

 private ImageView mActiveImage **,** mThumbnailImage**;**

 private ColorGenerator mColorGenerator **=** ColorGenerator**.**DEFAULT**;**

 private TextDrawable mDrawableBuilder**;**

 private SimpleAdapter mAdapter**;**

 public VerticalItemHolder**(**View itemView**,** SimpleAdapter adapter**)** **{**

 super**(**itemView**,** mMultiSelector**);**

 itemView**.**setOnClickListener**(**this**);**

 itemView**.**setOnLongClickListener**(**this**);**

 itemView**.**setLongClickable**(**true**);**

 // Initialize adapter for the items

 mAdapter **=** adapter**;**

 // Initialize views

 mTitleText **=** **(**TextView**)** itemView**.**findViewById**(**R**.**id**.**recycle\_title**);**

 mDateAndTimeText **=** **(**TextView**)** itemView**.**findViewById**(**R**.**id**.**recycle\_date\_time**);**

 mRepeatInfoText **=** **(**TextView**)** itemView**.**findViewById**(**R**.**id**.**recycle\_repeat\_info**);**

 mActiveImage **=** **(**ImageView**)** itemView**.**findViewById**(**R**.**id**.**active\_image**);**

 mThumbnailImage **=** **(**ImageView**)** itemView**.**findViewById**(**R**.**id**.**thumbnail\_image**);**

 **}**

 // On clicking a reminder item

 @Override

 public void onClick**(**View v**)** **{**

 if **(!**mMultiSelector**.**tapSelection**(**this**))** **{**

 mTempPost **=** mList**.**getChildAdapterPosition**(**v**);**

 int mReminderClickID **=** IDmap**.**get**(**mTempPost**);**

 selectReminder**(**mReminderClickID**);**

 **}** else if**(**mMultiSelector**.**getSelectedPositions**().**isEmpty**()){**

 mAdapter**.**setItemCount**(**getDefaultItemCount**());**

 **}**

 **}**

 // On long press enter action mode with context menu

 @Override

 public boolean onLongClick**(**View v**)** **{**

 AppCompatActivity activity **=** MainActivity**.**this**;**

 activity**.**startSupportActionMode**(**mDeleteMode**);**

 mMultiSelector**.**setSelected**(**this**,** true**);**

 return true**;**

 **}**

 // Set reminder title view

 public void setReminderTitle**(**String title**)** **{**

 mTitleText**.**setText**(**title**);**

 String letter **=** "A"**;**

 if**(**title **!=** null **&&** **!**title**.**isEmpty**())** **{**

 letter **=** title**.**substring**(**0**,** 1**);**

 **}**

 int color **=** mColorGenerator**.**getRandomColor**();**

 // Create a circular icon consisting of a random background colour and first letter of title

 mDrawableBuilder **=** TextDrawable**.**builder**()**

 **.**buildRound**(**letter**,** color**);**

 mThumbnailImage**.**setImageDrawable**(**mDrawableBuilder**);**

 **}**