

WALLPAPER CHANGER (ANDROID)

Ever been bored seeing the same wallpaper on your mobile phone over a long time but too lazy to browse a good wallpaper and change it. So, here is another problem statement of **Droid Wars 2017**. We ask you to make an android application that changes wallpapers constantly after a fixed duration. This app would make you familiar with a number of important android components like services, databases, etc.

NECESSARY FEATURES :

- The app must have an activity that shows all the albums that can be used as wallpapers' collections. The albums can be displayed by a list view, with each list item a **textView** denoting the name of the album.
- It must include a **Floating Action Button(FAB)** that enables user to create a new album. It must open a dialog box asking for a suitable name of the album.
- Clicking any album must open another activity showing all images in a **gridview**. It must also include a fab at the bottom to add more images. Clicking on the fab must direct to phone's gallery enabling users to select single/multiple images.
- The app must have another activity named **Settings Activity** in which user can select the album and decide the time in which wallpapers must be changed.

Hint: Use **SharedPreferences** to store user's album and time settings. You need to create a local database (Read about **SQLite Databases**) to store all the image paths. You must not store the image themselves as bitmaps or byte arrays in the database. Think of an appropriate model for realm db to store picture paths specific to an album. Based on the settings, you loop over the desired album to set the wallpaper. Also take into consideration the battery drainage and time mismatch factors while choosing a service for changing wallpapers.

BONUS FEATURES :

- Elegant User Interface, particularly **Material UI**.
- A **ViewPager** with separate pages for albums' and settings activity would be a great addition to the user interface.
- The albums' listview can be replaced by a **RecyclerView** and each item can be represented by a **cardview** giving a glimpse of the images present in the album.
- Apart from creating albums and manually adding images, the user must also be able to import images' folders present in phone's internal memory.
- The app must have the ability to rescan the above imported folders periodically say every 24 hours.
- Also, the user would be able to browse images on the internet and add them to any album.

PS : Bold words can be used as keywords for google search.