

Homework 6 – Background Operation & Notifications

Tasks

- Background Operation
 - If, the application is started, and the database is empty, use a worker to initially fill the database.
 - If the reload menu item is clicked, use a worker to reload the data.
 - If the URL for the feed changes, use a worker to clear the database and load the new feed.
 - Download new data once every half an hour using a worker (periodic request).
 - Delete all news items which are older than five days (in the periodic worker).
 - Other items must stay on the database (even if they are no longer in the feed).
- Notifications
 - If a new (not an updated) news item is downloaded, show a notification for it, if multiple new items exist, a notification for each item is shown.
 - The notification must contain the title and the image of the news item.
 - If the notification is clicked, open the details page of the news item.
- Download and save images in the filesystem (cache directory of the app).
 - If download images in the background is enabled.
 - Download the images in the worker.
 - Display the images from the caching directory.
 - Delete all orphaned images from the cache (images references only by previously deleted news items).
 - If download images in the background is disabled.
 - Use the current functionality and show the images directly from the web.
 - The show images setting is still valid (images are not shown, even if they are in the cache).

Grading

1. Download on start when DB is empty using a worker. - 5
2. Reload using a worker. - 5
3. Automatic download after feed URL changes using a worker, the old data is deleted. - 10
4. Periodic download using a worker. - 15
5. Deletion of items older than 5 days. - 10
6. Newer items (even if no longer in the feed) stay in the DB. - 5
7. Notification on new NewsItem. - 5
8. Multiple notifications work correctly. - 5
9. Title and image are displayed in the notification. - 5
10. No notification on updated NewsItem. - 5
11. Deep link is working (shows correct details page). - 5
12. Images are downloaded and saved in the cache folder of the app by the worker. - 10

13. Images are displayed from the cache (if download in background is on) or directly from the web (download in background is off). - 5
14. Orphaned images are deleted. - 5
15. Show image setting still works correctly. - 5