

Assignment 2

Topics In Software Engineering



*Sameer Ijaz – FA19-BSE-010*

*Muhammad Qasim – FA19-BSE-090*

*Hajra Afzal – FA19-BSE-038*

**Submit the report of any software (andriod application, Office 365, Outlook or any item ) based on the following options**

**1. What refactoring Strategies they use?**

**2. How they apply Re-write.**

**3. What is not change in the project. Examine the projects and submit the proof of changes wr.t a) Old Features,b) Newly added changes c) Changes for each versions, d) Current state.**

# Facebook

1. **What refactoring Strategies they use?**

Facebook developed a special tool for their refactoring needs named as Retrie. This tool allows developers to describe rewrites as equations in Haskell syntax rather than regular expressions. Retrie also leverages several techniques to narrow the search space before parsing and efficiently finding matches, which makes it faster than typical AST manipulation tools. In conclusion composing method group was used as refactoring strategy which includes extract method, inline method, inline temp etc.

**2. How did they apply rewrite?**

Facebook rearchitected Facebook.com using React (a declarative JavaScript library for building user interfaces) and Relay (a GraphQL client for React). A complete rewrite is extremely rare, but in this they knew it was the only way to achieve their goals for performance and sustainable future growth. Code size is one of the biggest concerns with a JavaScript-based single-page app. They implemented new APIs that work in line with their goal "as little as possible, as early as possible" mantra. They split the JavaScript needed for the initial load into three tiers using a declarative, analyzable API.

**3. What is not change in the project. Examine the projects and submit the proof of changes wr.t a) Old Features,b) Newly added changes c) Changes for each versions, d) Current state.**

When Facebook first launched in 2004 it consisted of these features.

* User accounts (with real names required), restricted to @harvard.edu email addresses.
* Friends, including friend requests
* Invitations (no contact importer; you had to enter each email address by hand)
* Profiles, with a single photo for each user
* Ability to list user metadata like gender, birthday, dorm, phone number, favorite music, favorite books, about me, courses (structured)
* Search by name, class year, courses, other metadata
* Some privacy restrictions to limit who could see your profile (friends only, only people in my class year)
* A feature to visualize a user's friend graph, which was later cut.
* Pokes (not 100% sure about this, it may have been added soon after launch, maybe someone can clarify)

Features that were **not** included and added later were.

* Messages
* The wall
* Status updates
* Photos beyond the single profile pic
* Groups
* News feed - the home page was mostly wasted space which would show site-wide announcements, friend requests, and pokes.
* Notifications (nothing happened except for friend requests and pokes)
* Events/parties
* Notes