Java-FLP project – *CapBooK (Facebook like application)*

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APPROACH AND EXECUTION PROCESS

APPROACH

The whole CapBook project will be divided into many modules (30 – 40 modules) and each participant of Java-FLP will work on an individual module.   Everyone will share common database, and architecture and package structure (nomenclature) must be same for everyone.   Once individual functionality will be realized, it will be integrated in one system and upon successful integration, it will be deployed for project evaluation.

PROCESS   (DAY WISE MILESTONES)

Day 1

- Project mentor will brief the associate about the modules, an assign who will work on which module (since each associates have to work on unique module)
- Associates will come up with data model (everyone will use only one database); the data model will be reviewed by mentor(s)
- So one day one - Module distribution and final DB model should be decided

Day 2

- Associates will create user-story (a low level requirement document, in which they will mention - what functionality they are going to do realize, and how end user will use it, all the constrains and exceptions will be there) This will be one or two page document. I will send a user-story template for better understanding.
- We will provide architecture; and associates needs to understand it, and run a dummy flow to ensure that they have understood the arch and are able to use it
- So the day target will be - ensuring understanding for functionality and arch

Day 3

- All associate will present a white board presentation to mentor(s) and whole batch. Here associate will describe - what he/she is going to build and how. Which all tables (DB) going to affected and what dummy data he will be using, etc.   Basic idea of this exercise is to ensure that - everyone (developer, team mates and mentors) is on same page in terms of requirement and approach. Here mentor may prevent the future mistake out of misunderstanding of requirement or wrong approach.
- UI (layout, color coding, look and feel etc) will be discuss on this day only
- One of the possible finding of these discussion may be some change is DB. So database creation will be last task of the day.
- Associate will send final draft of their individual user story to mentor(s) for review.

Day 4, 5 –

By day 3, we have DB model (database), page layout, HTML, architecture (SpringMVC), package structure is ready. Now associate will create dummy data in database and will start real work on their individual module

Day 6, 7, 8 - Integration, testing
Day 9 - Deployments and UAT by mentor(s)
Day 10 - Project Evaluation

A BRIEF ON CAPBOOK

ABOUT CAPBOOK

CapBook is a web based social networking site that allow user to create his/her profile and facility to socialize with other users by means by becoming friend, sharing photos, thought and posting comments on friend's wall, etc.

CapBook is specially developed for the employees of Capgemini. This site gives a feel of already established social networking sites like face book; with aim to enable employees stay connected irrespective of their locations.

Users of CapBook can register for an account, develop their profile, and then begin locating other members through CapBook directory/search and make connections with people they know or willing to know. Once connected, users can communicate with another member, upload pictures, create photo album, share their updates, join CapBook forums of their interests, or start their own forums. CapBook allows users to write and view walls. Users can join CapBook forum and announce interesting forum posts.

In nutshell CapBook is able to provide a basic and easy interchange of information and online socializing.

Macro level Operations/offerings:

1. Signup, Login or Logout

2. Create/updating profile (basic info, picture, user location etc)

3. Send and check private messages, (like email)

4. Update personal status, post wall on friend's wall, post comment on others status and wall-post

5. Friendship – can send friendship request, approve/reject request, invite friend to CapBook, refer /suggest a friend to existing friend, friend's birthday reminder, friend list, online friends

6. Create forum, joining any forum, create any topic on forum, discussion (posts) on the topic, leave the forum(un-join)

7. Notification (email and as a post on user's home page) about wall post, status, album. Photos, comments of the friends

Enhancements for Future:-

1. Chat Facility.
2. Customized Advertisements and event notifications.
3. Games.
4. Applications
5. SMS based notification

MODULE LISTS

S no.	Functionality	Brief introduction of the functionality
1	sign up, user activation	Signup or registration - here non existing user of CapBook will register or sign up for it; the email id will be user's login id. An activation mail will be send to the user (to authenticate if user's email id is valid) and on activation only user will be able to access his/her account
2	Login/Logout/session	User will login to the system, session will be established and can logout
3	User profile page	User's page. The page content will be different for logged in user and other user. after successful login - user will navigate to this page (we may term it as user's home page)
4	Password encryption	The password of the user must be encrypted in database - and will be decrypted while login and change password and forget password feature
5	Change password	User may change his/her CapBook account password. The new password should not be same as old one, and should also fulfill all the password related constrains of signup time.
6	Forget password	a email contain user's password (decrypted) will be send to the user
7	Profile picture	User can change his/her profile picture. This picture will also be part of user's default album
8	create album	A user can create a album and upload photos. If user directly upload a photo without creating an album, such pictures will be part of default album of user.
9	Tags (photos)	A user may tag friends with his/her photos. After tagging the photos will also be available on friends (tagged user) default album
10	User profile & Privacy settings	A user may set additional info about himself/herself like address, phone no, date of birth, area of interest, etc. User may mark these info as private. In case of private, these info will be visible to user's friends only
11	Logged in user profile page content	On home page (logged in user profile page) - activity of friends - means - wall post, status change, new album/picture of friends will be shown here.
12	add friend	A user may send friend request to other user. A send friend request user have to navigate to other user's profile page
13	approve/reject request	All friendship requests will be available on user's profile page (home page). User may approve or reject this response
14	friend list	List of all the friends of the user will be available on user's profile page (home page).
15	online friends	List of all the friends - who are online at this moment will available on user's profile page (home page). Here it should use Push technology to reflect the change (if a friend is logged in or logged off)
16	invite a friend	A user may invite his/her friends who don't have account in CapBook. User will send invitation mail to friend, this mail will have url of CapBook and other info
17	refer friend	Similar to friend suggestion of facebook. A user may suggest friend

18	wall post/delete	A user may post anything (text) on friend's (other user, who is friend of the user) wall - like scrapbook in orkut and wall post in facebook
19	user's wall	it will contain all the wall post (most recent one on top) of the user
20	Status	Similar to wall -post - but here user will post it on his/her own page. Also latest status of the user will always be available on user's profile page
21	post comment	A user may post comment on Wall post, user-Status and on photos
22	send message/reply (private message)	One user may send message to other user; This feature will be available on the reciever user's page; that is user who want to send a message to another user - the sender user have to navigate to receiver user's profile page. This message will be private in nature - which means only receiver can see this message and will not be available to anyone else.
23	check message	A user can check the entire message sent to him/her. This will be more like a inbox, where all read/unread messages will be displayed. User may click on the a message and that particular message will open
24	thumbs up & thumbs down	This is similar to like - dislike of you tube. A user may like (Thumbs up) or dislike (Thumbs-down) any comment/photo/wall-post/user-status
25	birthday reminders	On user's profile page (home page) - list of friend whose b'day is today will be shown
26	create forum	A user may create a new forum - Forum is a page where members may discuss on any topic. User who created the forum will be termed as moderator of the forum
27	join/unjoin forum	A user may join a forum (subjected to the moderator approval) and may also unjoin this forum
28	User's forum	On user's profile page - all the forum of the user (which user has created or joined) will be visible as link and on click on this forum page will open.
29	forum post	A user may post a discussion on any topic of forum and other user may continue the discussion with follow posts
30	forum topic	A member of the forum may create a topic. All existing topics should be visible on the forum page
31	forum administrator/moderator	Moderator of forum may approve/reject a membership request; also may delete any topic or remove any member from forum
32	search user, forum	A user may search friend/other-user/forum by their name. This functionality must support auto suggest feature
33	my location	Google map will show user base location. If user will change his address the map will change accordingly
34	e mail - sending service	A common class - which will be use by other functionality to send notification via email
35	send SMS	A common feature - which will be use by other functionality to send notification via SMS
36	home/profile page - integration	All features will be integrated in profile page (which is home page for logged in user, friend page for logged in user's friends and normal profile page for other user)

TECHNOLOGY AND ARCHITECTURE

TECHNICAL SPECIFICATIONS

1. ## Software Requirement:

   - JDK 10
   - Spring Boot 2.x
   - My SQL 5.x
   - SQL Yog 8.5 (optional)
   - Spring Tool Suite 3.9.x
   - Spring Boot Data
   - Spring Boot RestController
   - Angular5 - frontend
   - Junit - Unit testing
   - User Stories by using Gherkin
   - Cucumber StepDef
   - Selenium – Integration testing
   - Jenking – Build Server
   - Git - Source Code Repository
   - Postman

2. ## BDD Approach:
   - Use BDD approach throughout your application.
   - Follow Agile methodology for implementation. Daily scrum call and spring planning, sprint meeting should be encouraged by mentor.

3. System Architecture:

Two API need to be designed, one will get data from server (b) and another API will project the data using Angular MVC(a).

    a. **Angular5 MVC – Frontend**

    b. **Spring Boot – RestController**

a. Angular5 MVC API

| Client /browser | → ← | Angular Controller | ← | Angular Model |

Rest API Call JSON Response

b. SpringBoot - RestController

Dispatcher

RestController ⇄ Service ⇄ Dao

Database

SpringBoot Rest API