Yoga Practice Generator Application -

Functional Requirement Specifications (YB)

Minimum Viable Product

A Yoga app that can generate a general Yoga practice class for the end user. Based on the amount of time the user chooses, this will simply generate a video practice by stitching together the video recordings from Youtube using the tags for the user in a general Yoga Bharati class format.

Algorithm for Practice Generation (part of MVP):

As a matter of general rule, all practices can be categorized into:
- Position based: Standing, Sitting, Supine, or Prone practices
- Type of Practice: Breath and Body synchronization; Fast Breathing - preparatory breathing practices; Loosening practices; Dynamic practices (fast sequence of two or three poses); Surya Namaskar; Sequence (a bunch of asanas done in a sequence - ex: Cobra sequence; Supine Twist sequence, setubandhasana sequence, etc); Sukshma-Vyayama; therapeutic (knee pain practices, back pain practices etc); Asana; pranayam; meditation
- Application based : Classic; therapeutic; Advanced (exclusive)

The below tags bring the categories defined above along with other aspects:
Tags for practices (multiple tags can be marked per practice - some can overlap but not all)
- Classic
- Breath-Body-Synch
- Fast-breathing-Practice
- Loosening
- Dynamic
- Surya Namaskar (special sequence)
- Sequence
- Advanced
- Asana
- Therapeutic
- Sukshma-vyayama
- Pranayama
- Relaxation
- Meditation

- Upper Body
- Legs
- Spine
- Hip
- Core
- Standing
- Sitting
- Prone
- Supine
- Stimulating (some asanas cannot be done by themselves; they need to be followed with complementary pose - back bend followed by forward bend)
- Complementary to (this is a complementary asana; can be practiced by itself, but can also be followed after stimulating asana)
- Pair-count (this is a number that the stimulating asana is paired with)
- Teacher (Voice can be male/female or even a specific teacher)
- Duration - calculated? Or statically set?

Generation of a list of practices based on the formula below for the time entered by the user. **Skip Feature** would be nice to have here as people may not like to do everything that is randomly thrown at them. This makes it more functional. If it is not much work, please consider adding this in MVP.

Breakup - As a general rule:
- Preparatory practices before yogasanas (breathing, loosening, Surya Namaskar and short relaxation called QRT) (30-40%)
- Asana (30-40%) - tags - Asana and Sequence
- Final Relaxation and Pranayama (30-35%)

NOTE: Sometimes there can be more preparatory practices; sometimes more asanas and hence this variable ratio helps give different flavors. Overall it can be 100% or slightly more owing to the nature of practices;

Some more salient points:
- Make sure to cover practices in such a way that when the user is standing, all standing in that category of practices (say loosening) are done before sitting and so on…
- When a stimulating asana is given a corresponding complementary pose is necessary (not too many)
- With respect to position in which practices Preferred order:
  - Since Breath-Body-Synch and loosening are done for a shorter period of time, you cannot include all 4 categories. Pick one or two categories….*For example: if there is 8 mins, it is better to give 4 mins to standing and 4 to sitting or 4 mins to prone, and 4 mins to supine category than 2 mins in all of the four categories.* **Asana Category**

- You may give asanas in all four categories, or just 3 or just 2 categories; randomize
- Standing to sitting to prone to supine → OK → Preferred → Give more weightage to this order.. Even if random, generate this order more times than other sequence (60 mins class)
- Supine to Sitting to Prone to Standing → Okay → least preferred → Once in a while okay, so give very less weightage
- Supine to prone to sitting and then relaxation → OK → Regular weightage
- Standing to sitting and then relaxation (Supine) → OK → Regular weightage
- Sitting to standing if the user is already sitting in the previous category → OK → Regular weightage
- Prone to supine and relaxation (supine) → OK → Regular weightage
- Supine to prone to sitting to standing → OK → Regular weightage
- Standing to prone to Sitting to Supine → Not OK
- Standing to supine to sitting to prone → Not Ok

Among the categories above, the following breakup:

Preparatory Practices (30-40% of total time):
1. 10-20% of the total time - Breath and Body Sync
2. Optional IRT (random - toss a coin) - 1 min
3. 15-25% of the total time - Loosening and Sukshma Vyayama (treat the two tags the same)
4. Surya Namaskars (10-15% of total time) (random - toss a coin)
5. Short Relaxation after preparatory practices - (QRT 3 mins) - can be skipped if the total time is less than 40 mins.

Asanas (30-40%)
- Categories - Standing; Sitting; Prone; and Supine asanas;
- Ideally at least two practices in each category;
- Randomly skip one or two categories - if time is short;
- Some practices can belong to a set of asanas which may be complementary to each other or may be similar in nature so we can avoid generating same kinds of asanas; also some asanas may be stimulation followed by relaxation order; Practices are tagged with Set-n-m which means it belongs to a set with the number 'n' and the next digit 'm' simply means that only one of the practices tagged with number 'm' needs to be picked up followed by m+1 if it existed.
FOR EXAMPLE: Set-1-1, followed by Set-1-2;
    If there is more than one practice with set-1-1, then only one of them needs to be picked up.

Relaxation and Pranayama should constitute 30%

- Relaxation (different durations and types are available) - 10-15%; *(different duration relaxation practices will be in the database; for example - 3 min qrt to be used when total time is less than 40 mins)*
- Pranayama - 15-20%

Final Polished Product (Therapy Version)

A Yoga app that can generate a yoga practice for the client based on following selected parameters. One of the prime features is to be able to get a list from the Yoga Therapist and include it in the client's profile. Appropriate practices will be suggested by the therapist and perhaps the exclusion list recommended by therapist

1. No need for Levels
2. Optional Yoga Therapist advised recommendation list or exclusion list is given to the App.
3. Focus
   a. Upper body (Shoulder, arms, wrists and upper back)
   b. Lower body (knees, thighs, hamstrings, foot)
   c. Spine and core and hip
4. Style
   a. Classic Holistic
   b. Advanced Holistic
   c. Subtle and Gentle
   d. Therapeutic
   e. Cardio-like Dynamic Yoga
   f. Chair yoga
   g. Relaxation
   h. Meditation
5. Time (20 mins, 40 mins,60 mins, etc)
6. Up and down keys for asanas to increase the duration of the hold
7. Star (*****) for like and dislike so that the app learns users' preference.
8. Modify feature and Skip feature — Modify feature can give an easier version of the same pose or practice; Skip feature can allow them to skip if they cannot or don't want to practice it. Skip may simply mean *today* I want to skip. Not that I dislike it.
9. Reset button to rest my stars...

Focus:
NOTE: Yoga Therapists can give a recommended list or an exclusion list; If this is an exclusion list, then all the below styles are allowed with exclusion; If it is a recommended list, only therapeutic option is possible.
1. Classic Holistic Yoga - Usual above Formula

2, Advanced Holistic Yoga - Same formula as Classic, just that the asanas can include advanced asanas

2. Subtle and Gentle - Simple breath and body synchronization as marked 20%; Sukshma Vyayama 30%; and asanas as marked (15%); relaxation

3. Cardio and Dynamic - 10-15% breath and body synch **OR** Fast breathing; 40-50% Dynamic and Loosening and then rest is relaxation and pranayama

5. Therapeutic - This is a recommended practice list as given by the therapist (See note above)

6. Restorative - No Dynamic - Asana time will be 40% - 20% asanas, 20% Restorative; Longer DRT or MSRT and Pranamaya 20%

5. Relaxation - Only Relaxation Practices - DRT, MSRT, different types

6. Meditation - Meditation Practices, MSRT, Pranayama variations; PET; Om meditation, etc

Other Features:
1. A feature may be included to **track their yoga practice** and users can see the dates/times that they practiced as an automated log.
2. A **settings page** may be included for the user to change their own information as needed.
3. Social features built into it (Yoga Habit App)

Technical Specifications (Free Flows)

Client side : Expo Managed Workflow (all JavaScript)
Backend : Firebase, specifically Authentication and Firestore
Storage : YouTube (with YouTube Data API)

Sample Onboarding Flow:
https://drive.google.com/file/d/153l8KXgqeCCNPB_wXAZ2XPF9Aw8sWGr0/view?usp=sharing

React Native Youtube Library:
https://www.npmjs.com/package/react-native-youtube-iframe

Firestore documents:

Example practice document:
youtubeVideoId: String

practiceName: String
tag: String
contraindications: [String] (String Array)
benefits: [String] (String Array)
duration: String
style: String
Example user document:
Collection name: Users
userId: String
email: String
contraindications: [String] (String Array)
practicePreferences: [String] (String Array)
preferredWeeklyPractices: Int
Collection name: Feedback
userId: String
youtubeVideoId: String
liked: Boolean (true if thumbs up/false if thumbs down)
feedback: String (specific written message for the video)
CSV Format (likely to change after discussion):

Example:
https://docs.google.com/spreadsheets/d/1PmWPUig3uFs06GovHbyp1LvprvpL0atxhzwWYy-6Erk/edit#gid=0

Ultimately, both organizations will be working together to make sure that
  ● the appropriate tags and videos are in the right place and utilized correctly
  ●