Assignment: Movie Search Capability feature

1. Make a top-level plan of what to do:
   1. Display all the content in search home page with search feature enabled.
      1. In Scope:
         1. Only web application
         2. Search capability home page (no detail page)
         3. Search capability based on keyword and type ahead keyboard search
      2. Assumptions:
         1. Team:
            1. Scrum team - 1 front end, 2 backend, 1 DB & 1 QA resource
         2. Application: (Already developed)
            1. Feeds of meta data from external sources are available in DB
            2. Meta data information to be sync in Elastic Search on real time
            3. Images of the videos compressed and saved in CDN
            4. Messenger queues to transmit and consume information from external sources real time
            5. Not owning any of the offline videos, assuming that all the video content would be transmitted by different providers
2. Create a list of questions to solve to get all details
   1. Front-end UI:
      1. Do we need a horizontal scroll if the number of movies doesn’t fit the window? Or a right arrow at the end to scroll to the right?
      2. On hover any details to be displayed?
      3. What if there are no movies associated to a category? Do we still show the category?
      4. On the top we have a search bar, and in the bottom, we have one more search bar. UI team to correct this or give the right mockup
   2. Back-end:
      1. What if the searched movie is not available, any user-friendly message to show?
      2. Do we need to fetch all the information or limit it by a value?
      3. Do we need to sort the movies based on rankings?
      4. Do we need to suggest or recommend movies to the user, then need to work on algorithm to achieve this based on user search or his/her interests?
      5. On hover on the card, do we need to play part of the movie/trailer?
      6. Need details of main menu icon, on click where to redirect or do we need to open a menu, what would be the details of it
   3. DB:
      1. Based on the above Back-end questions – there would be trailing questions on the tables and the structure would change
3. Create a structure of tasks with requirements, which you are going to transmit to our teams to make search page
   1. Data model: (2weeks)
      1. Tables to store Offline videos meta data:
         1. Lookup table for all the providers
         2. Table to store the video and provider relationship (Assuming we had one flat table with provider as a column)
      2. Tables to store Online TV shows meta data:
         1. Need tables to store meta data of the videos with their timings
         2. Add a category/group column Create categories and every video should have a category associated to it
   2. APIs: (4weeks – dev and unit testing)
      1. Sync the data between the transactional DB and Elastic Search
      2. Need to fetch titles as per the category in sorted order as per the user
      3. Need to fetch the timings of the videos that are watched by the user
      4. Need to fetch the main actors for the videos that are watched by the user
   3. Integration with External systems (4weeks – integration and testing)
      1. Fetch the data from different providers and save into our DB
      2. accounting time for couple of transformations based on the feed that we receive from different providers
   4. Front end (2weeks – dev and unit testing):
      1. 2 Card components change (include few more attributes to show the channel names, provider name, etc.)
      2. Search bar and main menu hamburger icon
      3. CTAs on the cards, icon - Integration with APIs,
   5. Functional testing and deployment (1week)
4. Figure out risks and your steps in risk management
   1. Integration with external sources. Need to get the feeds on real time. Connection not established or break intermittently in between
      1. Mitigation: Can go with the batch jobs initially and then move towards real time
   2. Alignment with all the external providers on the meta data would be time taking and challenging
      1. Mitigation: One Universal JSON format to be finalized and providers to share the info as agreed. Providers would ne onboarded in iterative manner
5. Figure out estimates – how long every part may take and why
   1. API and frond end developments can start parallelly after Data model is finalized and tables are created with constraints. Provided ballpark estimates as per my experience, these may vary once we groom these requirements with the team and get their actual estimates.
   2. Overall the project can be completed in 6weeks (4weeks development and 2weeks for testing and fixing issues)
   3. Not creating a project high level Gantt chart with list of milestones and resourcing ramp-up/down as we have few queries unanswered