MOVIE RENTAL SERVICE Release 2

(to be handed out after the time slot for handling Release 1)

For the second release, among bugfixes to our existing web application, the following is planned:

Note: These features are not implemented in the Autothon version of the app, which only receives some fixes and small changes.

Mobile Apps

A mobile app will be released. It will be a React Native app, with the same features as the web app and a couple of extra features (see below). It will be released for the last three major releases of both iOS and Android. Tablets and mobile phones will be both be targeted.

Users of the mobile app will get a voucher for one extra movie rental upon first login via the app. Also, the app will feature notifications for return-deadlines.

Also, users will be able to scan a barcode/QR code of a physical copy of a movie, and they will be taken to that movie's entry in the app. If the movie is not yet in our database, it will be added to a backlog of movies (with a corresponding counter of times that movie has been requested) that admins can view.

Data Warehouse & Reporting

The third major addition is the data warehouse & reporting. Here the system will aggregate information from the rental application, the payment system, streaming infrastructure as well as various other sources, such as ads (both ads hosted in our app and ads for our app on other platforms).

This will be loaded into a DWH using ETL jobs (with load/unload functionality), with data quality indicators (DQIs) and collect data to evaluate KPIs for external data sources. The DWH implementation will use a classic SQL-based database (either Oracle or MS SQL Server, not decided yet).
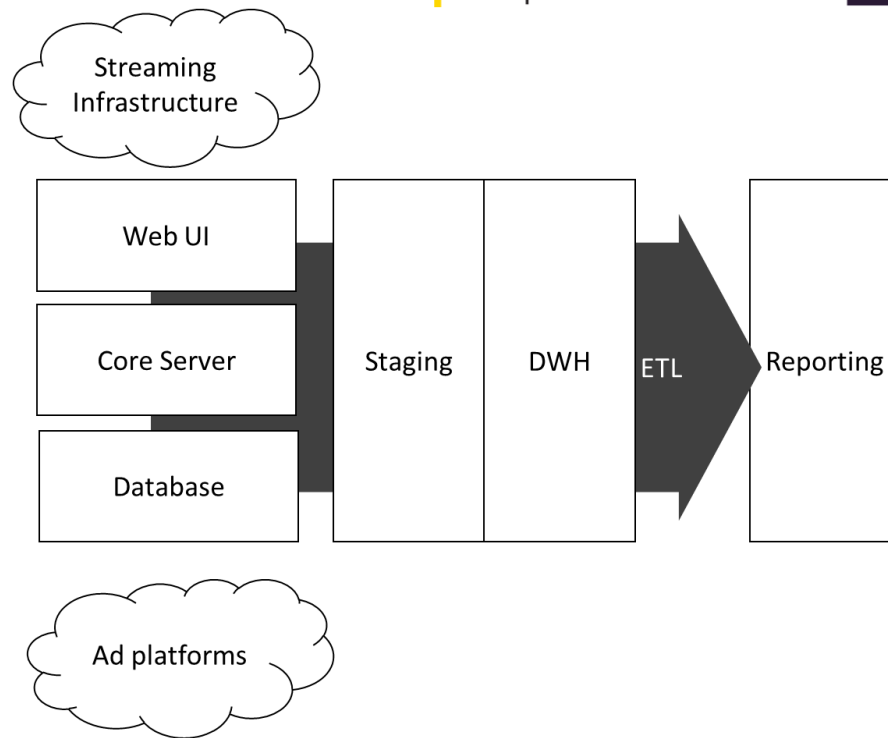
Our internal BI team can then select from a series of pre-defined reports (mainly time-series and aggregate reports) with the main focus areas of evaluating movie performance, user behavior and financial data. These will be displayed in HTML, with an export function for PDF and SVG. Report parameters can be defined (e.g. start and end date of series, scope of the report). A dynamic way of building your own reports is not yet in scope but should not be hindered by the current implementation.

Streaming

Users will be able to directly stream the movies they have rented. This will be implemented without any browser-plugins, purely using HTML5. The movies will be stored in - and streamed via – data storage in Microsoft Azure. We will not build our own streaming infrastructure but use external resources for that. We will only license/curate/manage the content and provide access for our users. Therefore, for the time being, transcoding to different formats etc. is also not in scope.

The video player on the page itself will be based on an open-source embedded player, but we will make some rather fundamental changes to it. Users will be able to view the movie in real-time, turn on/off available subtitles, in some cases switch the audio. They will be able to play, stop, pause, fast-forward, rewind, jump in the timeline. When playback is stopped/interrupted or times out, the last position is saved as a bookmark. When the user again opens the movie, they will be presented with the option of continuing where they have left off.

This feature will initially only be released for the web app, but a release for mobile is a fixed part of the roadmap.

This is a highly critical aspect, since it is new territory for us, but also a central feature for our future. If clients are not satisfied with the actual viewing experience, they will immediately dismiss us as a

streaming platform. This will not only hurt our streaming business, a but also our general image as a physical video rental platform.

PROBLEM STATEMENT

Automation implementation:

Maintain your tests by:

1. Create a new git branch "TestAutomationV2" and switch to it
2. Run your automated tests again.
3. Adapt your automation to reflect the changes

List the changes you've encountered and how you handled them in a text file.

Same points about achievements & points detraction apply as above.

Also push this file and the updated version of your test automation to the git repository, and create a pull request to your Autothon repo.

Automation Strategy:

1. Read the updated documentation.
2. Include one slide for your automation approach for each new component (e.g. DWH, payment, streaming content).
3. Also include a slide on how these components can be automatically tested in an integrated way
    1. From a CI/CD perspective
    2. From a test data management point of view
    3. From re-use across systems and test levels
4. For these new aspects, you realize you will need international help from the other geographies. Include a slide on how to handle this.
    o The DWH experts are in the Nordics and Romania
    o The payment experts are in the US and Germany
    o The streaming experts are in Singapore and Austria
    o The mobile experts are in India
5. Also adapt your existing strategy aspects accordingly.

Also push this file to the git repository and create a pull request to your Autothon repo.