22024 – Engine Optimization

# Design 1 – Link elements with fetching CSS files

First design was to retrieve CSS content file from the backend and inject into the head of the HTML. The following is metrics for timing.

A screenshot of a computer program

AI-generated content may be incorrect.

These timing metrixes are coming from the ThemeManager.ts from the start of the set theme method to the end of the method fetching data points for the theme.

|  |  |
| --- | --- |
| Theme | Timing |
| taylor\_morrison (on disc) login | 6 sec |
| Historymaker (db enabled) | 5 sec |
| Default (on disc) | 1 sec |
| Taylor\_morrison (db enabled) | 1sec |
| Default (on disc) | 2 sec |
| Wild (on disc) | 1sec |
| Default (on disc) | 1 sec |

This is not the full effect because the theme css file is retrieved by the browser. The following table shows the metrics for calling for the css file.

|  |  |  |  |
| --- | --- | --- | --- |
| DB Enabled theme | Theme | Start Debug time | Time |
| Historymaker | Default | 51.22sec | 28.99sec |
|  | Historymaker | 51.22sec | 28.99sec |
|  |  | **Total** | **28.99sec** |
| Taylor\_morrison | Default | 120sec | 17.06sec |
|  | Taylor\_morrison | 120sec | 15.85sec |
|  |  | **Total** | **15.85sec** |

This is the issue with first pass of implementation.

# Design 2 – CSS String with Style Element

Second design was to query a CSS string and inject a style element into the head of the html. Also, some optimization on the backend was done to build the CSS better.

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|  |  |
| --- | --- |
| Theme | Time |
| Default (on file) login | 5sec |
| Historymaker (db enabled) post-login | 9 sec |
| Default (on file) | 1 sec |
| Wild (on file) | 1 sec |
| Default (on file) | 1 sec |
| Taylor\_morrison | 2 sec |
| Historymaker | 2 sec |

API calls to fetch the CSS string:

|  |  |
| --- | --- |
| Theme | Time |
| Default | 2.12 sec |
| Historymaker | 1.94 sec |
| Taylor\_morrison | .542 sec |

# Current

A screenshot of a computer program

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# Analysis

In the first approach, we don’t exactly know when the browser is kicking off the api call to get the CSS file, but it is definitely taking longer that the second approach. Keep in mind this is just running locally.