# Project Objectives

An objective of this project is to create a software module for web based automated testing that intercepts a moment when a web page has finished to load and update its content so it is ready to continue testing.

# Motives

An overview of available methods to determine if a web page is ready shows a gap. There is no reliable and the same time universal for each browser method to catch a “stand by” state of a web page.

QA Automation of web bases applications is required the such feature.

# **Implementation**

The implementation should be based on the standard JavaScript language and libraries like jQuery supported by the main web browser:

IE v.11+

Chrome v. 55+

FireFox v. 50+

Safari.

# **Available Methods Overview**

## JavaScript DOMContentLoaded event

The event is fired when the initial HTML is completed loading. That event indicates start of execution a series of ajax calls to the server to get more page content.

This event cannot be used as a reliable indicator that a web page is ready.

## JavaScript Document.readyState variable.

This variable may have several values. When its value equal to “complete” it means that the document and all sub-resources have finished loading. The “complete” value does not guarantee that page’s content is in final “completed” state when using with Chorme browser.

This variable is an alternative to the DOMContentLoad event. It cannot be used as an indicator that a web page is ready.

This variable can be used as a reliable indicator that the content is ready only with IE v11+.

## JavaScript “load” event.

This event is fired when a resource and its dependent resources have finished loading.

This event cannot be used as indicator that web page content is ready because it does not reflect state of all ajax calls sent to server after the initial content is loaded.

# **Alternative** **Approach**.

The next phase of the project is to research if a changes in a page content can be used as a signal that page is still loading or ready.

For example, the simplest algorithm can be as short as the following: when a page content is stopped.

One of the possible implementation can use String form of page’s source to build MD5 hash sum of it. Any changes in this page content will make MD5 hash be changed.

A moment when the hash sum is the same after two consequence checks may indicate that page is stopped loading.

# **Conclusion**

A reliable way to intercept a page is ready moment still need to be built. There is no ready to use solution yet but there are options.