

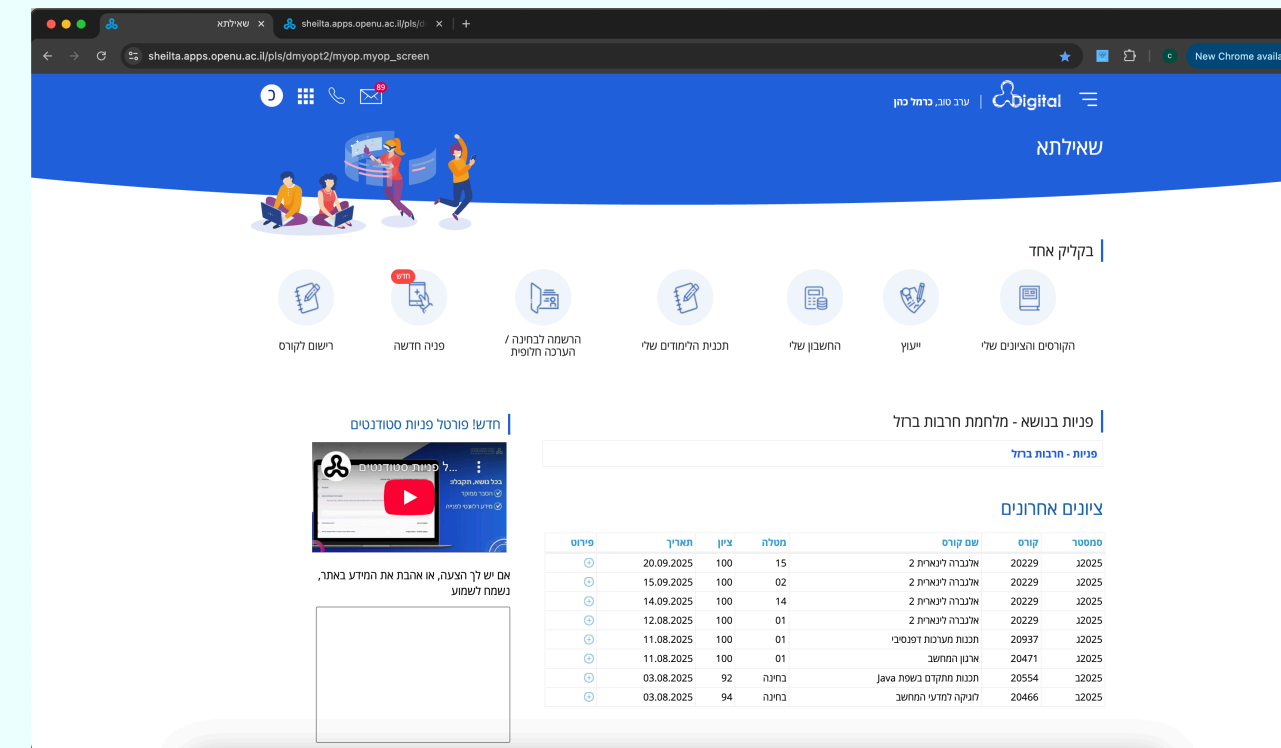
# Sheilta KeepAlive Ext.

Enough worrying about refreshing

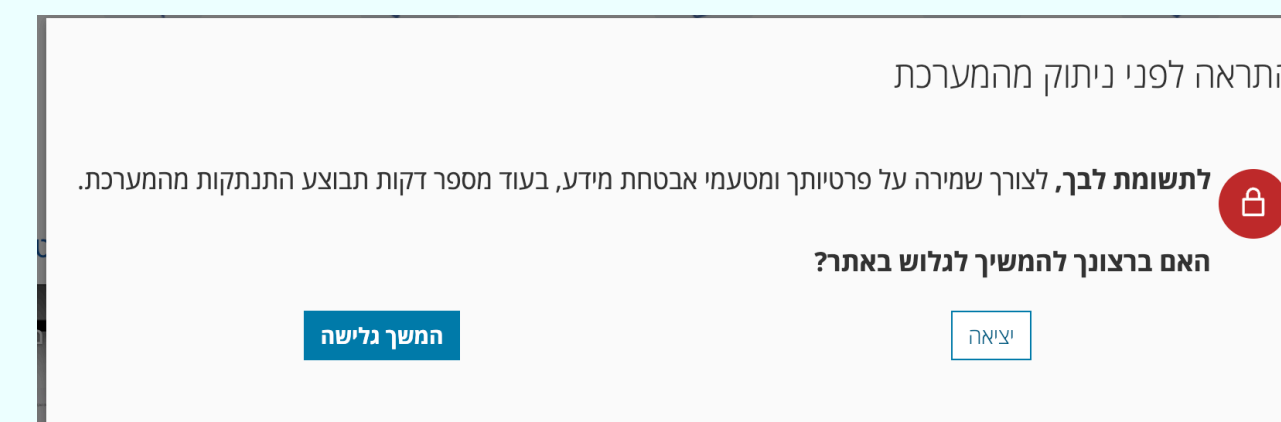
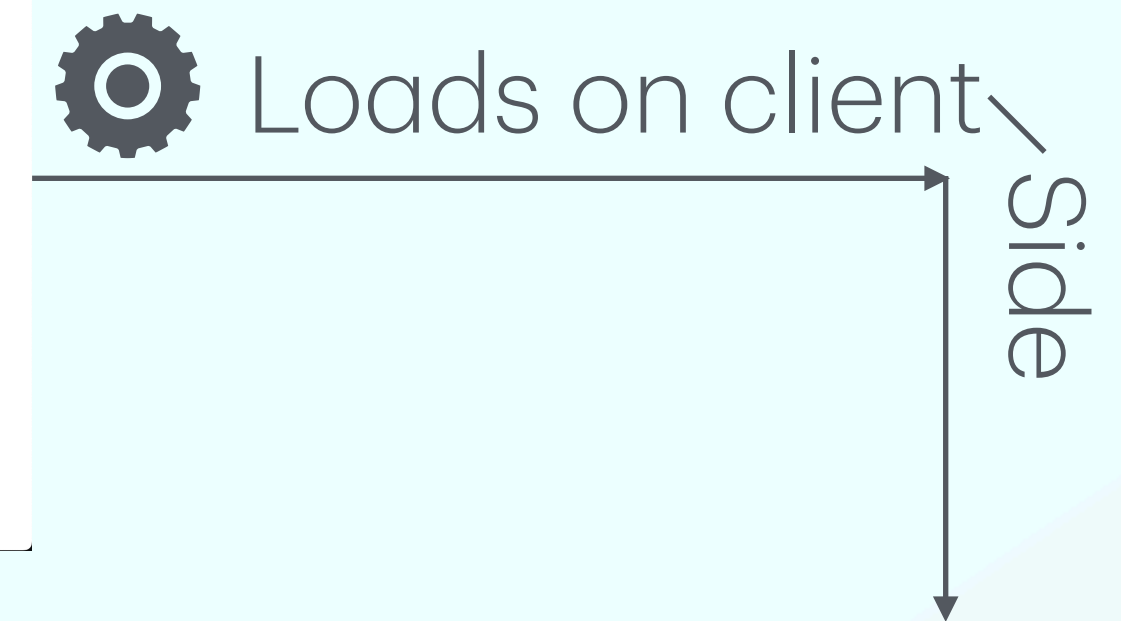
# The Problem

## 30 minutes is not enough...

- Sheila logs out after 30 minutes of inactivity
- Frustrating when watching videos on another domain → Sheila tabs expire
- **Motivation:** automate session keeping without manual refresh

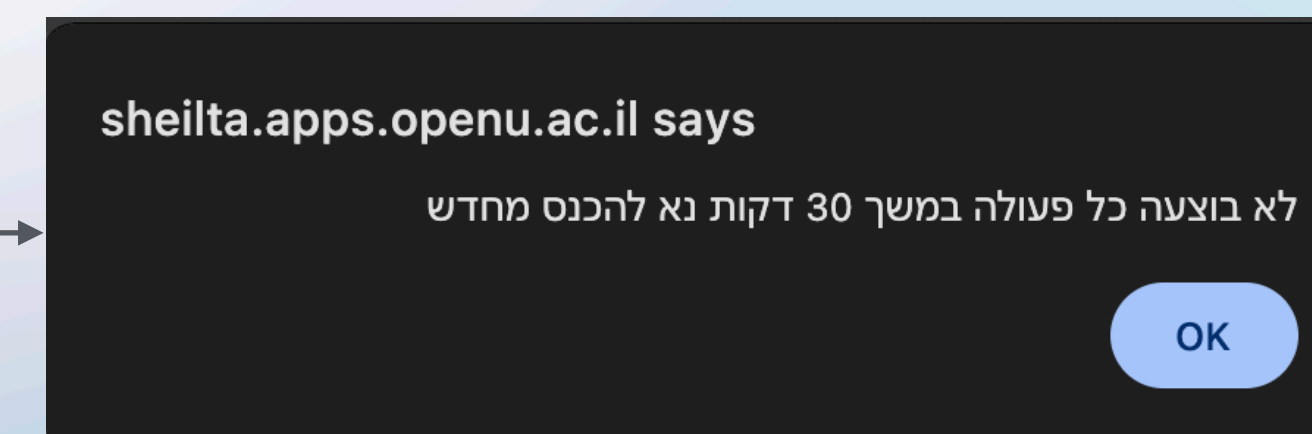


sheilta main page



~10 sec warning

End



session died

Triggers

```
// version 1.0.0 2011/2010
// version 1.0.6 14/08/2013
// version 1.2.3 30/08/2019

//checkurl = https://sheilta.apps.openu.ac.il/pls/myapp2/session_guard
//refreshurl = https://sheilta.apps.openu.ac.il/pls/myapp2/session_guard?refreshed
//logouturl = https://sheilta.apps.openu.ac.il/pls/myapp2/logout

function SessionGuard() {
    // Summary
    // Initial a new SessionGuard object.
    // Required settings are: checkurl, refreshurl, logouturl.
    // Summary
    // Required settings
    this.checkurl = null;
    this.refreshurl = null;
    this.logouturl = null;
    this.defaultInterval = 30;
    this.alertInterval = 10;
    this.minimumInterval = 10;
    this.dialogId = "session-guard";
    this.dialogTest = this.dialogId + "-yes";
    this.dialogId = this.dialogId + "-no";

    var this = this;
    var dialogRaised = false;
    var loginTimeoutId;

    this.start = function () {
        // Summary
        // Start the session guard timer.
        // The properties checkurl, refreshurl and logouturl must be set before this call.
        // Summary
        if (!this.checkurl) {
            console.error("SessionGuard error: checkurl is required.");
            return;
        }
        if (!this.refreshurl) {
            console.error("SessionGuard error: refreshurl is required.");
            return;
        }
        if (!this.logouturl) {
            console.error("SessionGuard error: logouturl is required.");
            return;
        }
        setTimeout(check, this.defaultInterval * 1000);
    };

    this.initial = function () {
        // Summary
        // DEPRECATED, use start() instead.
        // Summary
        this.start();
    };

    var check = function () {
        requestUrl(this.checkurl, checkCallback);
    };

    var checkCallback = function (nextIntervalText) {
        var nextInterval = nextIntervalText ? new Number(nextIntervalText) : NaN;
        if (isNaN(nextInterval)) {
            setTimeout(check, this.defaultInterval * 1000);
            return;
        }
    };
}
```

session-guard-1.0.js

# Investigation Process

Curiosity kicks in..

- **Explored login/logout flow**
  - **Login** → session-guard-1.0.js loaded
  - **Logout** → different APIs for Sheilta vs course tabs
- **Session-guard-1.0.js revealed**
  - **checkUrl** → returns session TTL (seconds)
  - **refreshUrl** → resets session cookie
  - **logoutUrl** → forces logout

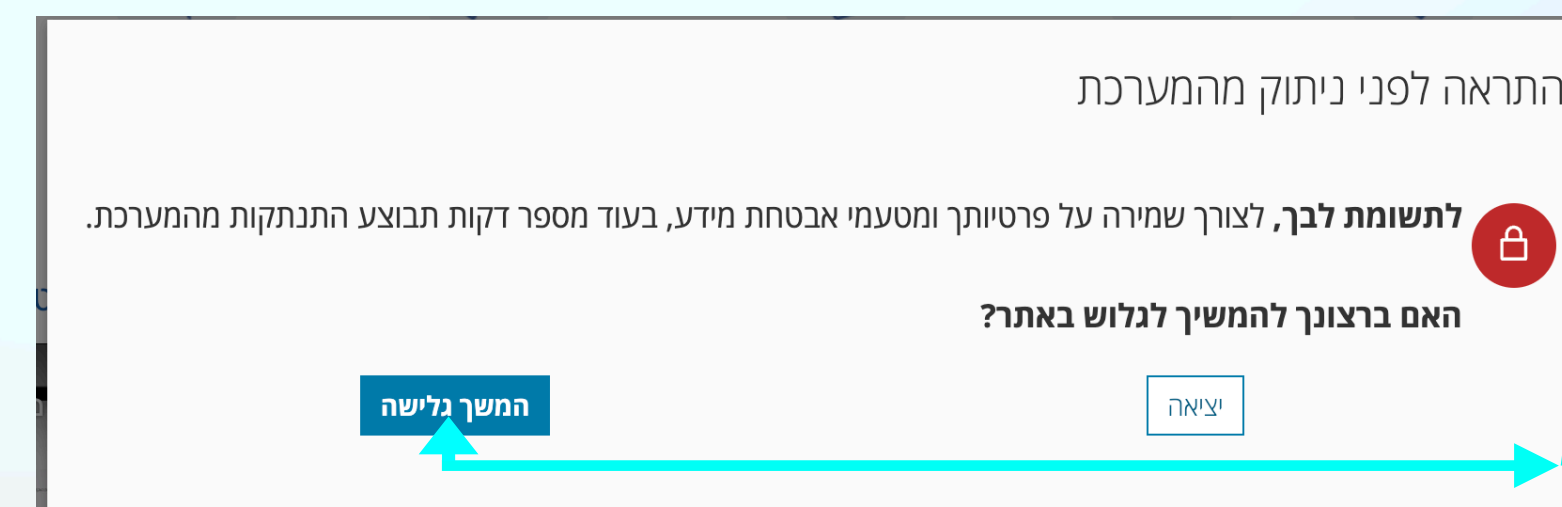
```
<script type="text/javascript" src="/ows-img/_default/scripts/session-guard-1.0.js"></script>
<script type="text/javascript">
    var sao = new SessionGuard();
    sao.checkUrl = "session_guard";
    sao.refreshUrl = "session_guard?p_refresh=1";
    sao.logoutUrl = "https://www.openu.ac.il/students/pages/default.aspx?logout=1";
    sao.initial();
</script>
```

```
var refresh = function () {
    if (logoutTimeoutId) {
        clearTimeout(logoutTimeoutId);
        logoutTimeoutId = false;
    }

    requestUrl(_this.refreshUrl, checkCallback);
};

var logout = function () {
    if (_this.logoutUrl) {
        top.window.location.href = _this.logoutUrl;
    }
};
```




```
function requestUrl(url, callback) {
    if ($) {
        $.ajax(url, {
            method: "POST",
            success: callback,
            error: function (error) {
                callback(null);
            },
            xhrFields: { withCredentials: true },
        });
    } else {
        var xmlhttp = new XMLHttpRequest();
        xmlhttp.withCredentials = true;
        xmlhttp.onreadystatechange = function () {
            if (xmlhttp.readyState == 4) {
                if (xmlhttp.status == 200) {
                    callback(xmlhttp.responseText);
                } else {
                    callback(null);
                }
            }
        };
        xmlhttp.open("POST", url, true);
        xmlhttp.send();
    }
}
```

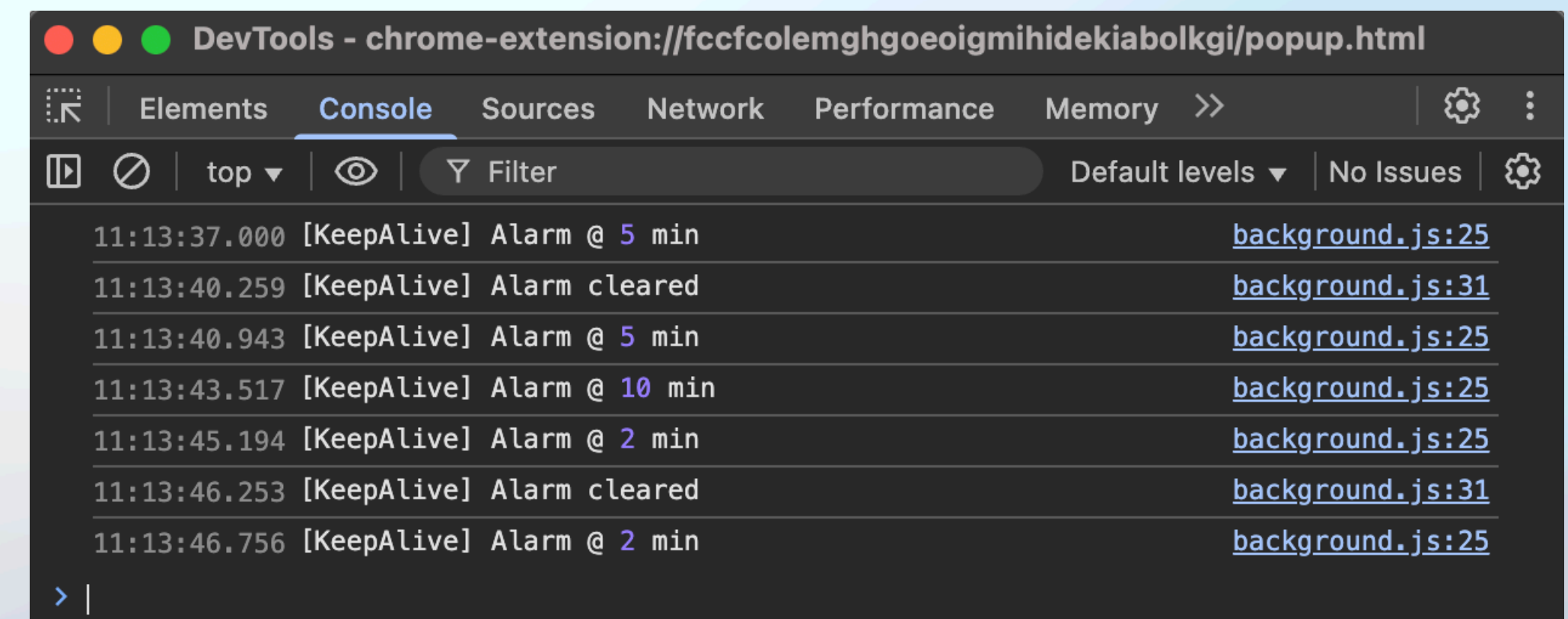
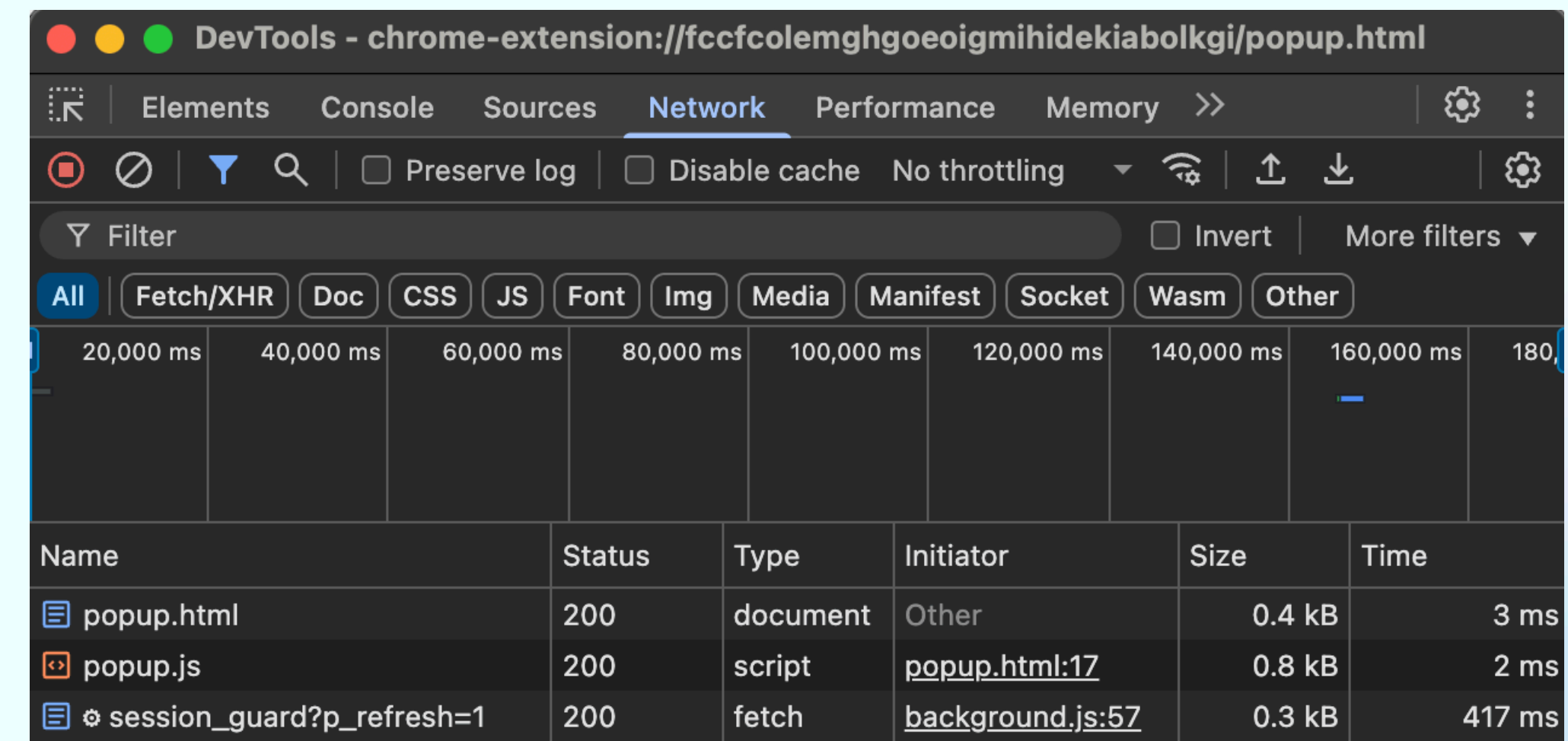
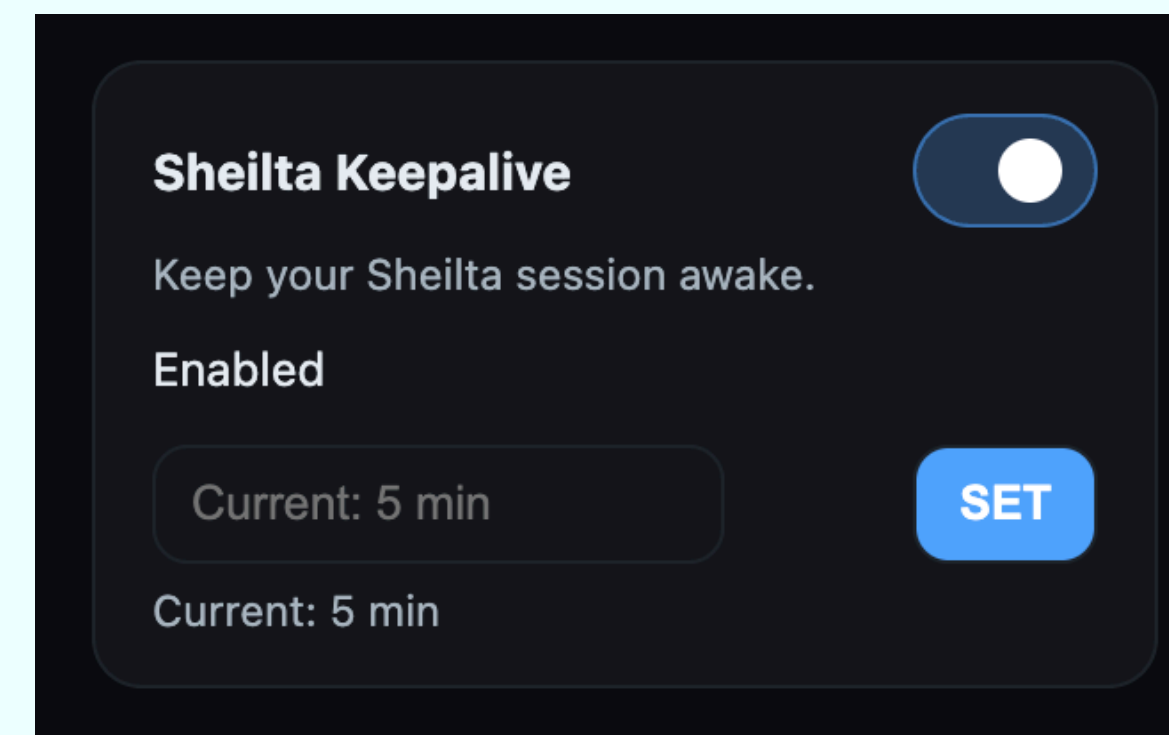




# Solution Design

## Chrome loves extensions...

- Runs quietly in background
- Periodically calls `refreshUrl`
- Key features:
  -  Toggleable On/Off
  -  Configurable interval
  -  Smart check → only if Sheilta tab open



# Code Walkthrough

Enough with the talking...

- **Alarm setup** → triggers every X minutes
- **Tab detection** → verifies Sheilta tab exists
- **Keepalive fetch** → calls refreshUrl with cookies

```
function startAlarm() {
  chrome.alarms.clear(ALARM_NAME, () => {
    chrome.alarms.create(ALARM_NAME, { periodInMinutes: intervalMin });
    console.log("[KeepAlive] Alarm @", intervalMin, "min");
  });
}

function stopAlarm(): void {
  chrome.alarms.clear(ALARM_NAME, () => {
    console.log("[KeepAlive] Alarm cleared");
  });
}

chrome.runtime.onInstalled.addListener(() => applyEnabledState(enabled));
chrome.runtime.onStartup.addListener(() => applyEnabledState(enabled));
```

```
function hasSheiltaTab(cb) {
  chrome.tabs.query({}, (tabs) => {
    cb(
      tabs.some((t) =>
        /^https:\/\/sheilta\.apps\.openu\.ac\.il\/i.test(t.url || "")
      )
    );
  });
}
```

```
chrome.alarms.onAlarm.addListener((alarm) => {
  if (alarm.name !== ALARM_NAME) return;
  if (!enabled) {
    console.log("[KeepAlive] Disabled. Skip.");
    return;
  }

  hasSheiltaTab((has) => {
    if (!has) {
      console.log("[KeepAlive] No Sheilta tab. Skip.");
      return;
    }

    fetch(SHEILTA_REFRESH_URL, { method: "GET", credentials: "include" })
      .then((res) => {
        if (res.ok) console.log("[KeepAlive] refresh OK:", res.status);
        else console.warn("[KeepAlive] refresh non-OK:", res.status);
      })
      .catch((err) => console.error("[KeepAlive] refresh error:", err));
  });
});
```

```
const ALARM_NAME = "sheiltaKeepAlive";
const SHEILTA_REFRESH_URL =
  "https://sheilta.apps.openu.ac.il/pls/dmyopt2/session_guard?p_refresh=1";

let enabled = true;
let intervalMin = 5;

chrome.storage.local.get(
  { sheiltaEnabled: enabled, sheiltaIntervalMin: intervalMin },
  ({ sheiltaEnabled, sheiltaIntervalMin }) => {
    enabled = !!sheiltaEnabled;
    intervalMin = Number(sheiltaIntervalMin) || intervalMin;
    applyEnabledState(enabled);
  }
);
```

# LET'S DEMO THIS

[https://sheilta.apps.openu.ac.il/pls/dmyopt2/myop.myop\\_screen](https://sheilta.apps.openu.ac.il/pls/dmyopt2/myop.myop_screen)