

Examining web browser histories

©Jonas Blocher

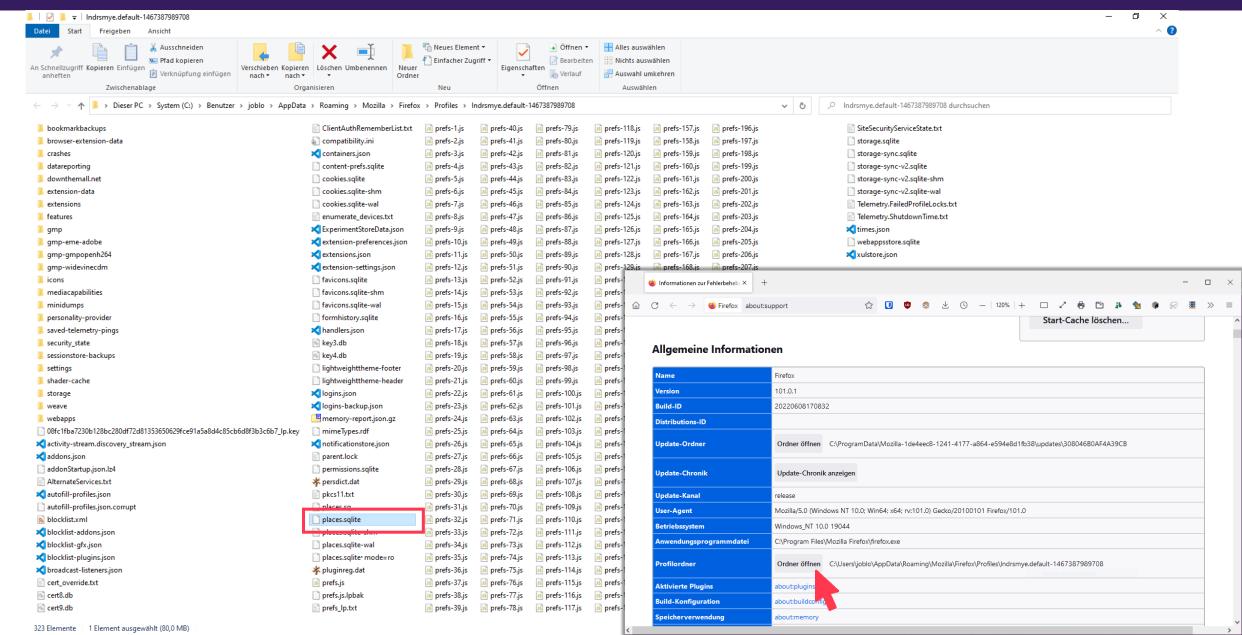






Retrieving the browser history







About sqlite



- small and self-contained SQL database engine
- No standalone process
- Used as linked library
- Entire Database is stored as single file



- + "zero-conf" database
- + Low access latencies

- Concurrency (only file system locks)
- No Access control



Investigating places.sqlite



```
SELECT * FROM sqlite master WHERE type = "table";
```

	I type ‡	■ name ÷	I tbl_name	Ⅲ r ‡	III sql ÷
1	table	moz_places	moz_places	2	CREATE TABLE moz_places (id I
2	table	moz_historyvisits	moz_historyvisits	3	CREATE TABLE moz_historyvisits (
3	table	moz_inputhistory	moz_inputhistory	4	CREATE TABLE moz_inputhistory (
4	table	moz_hosts	moz_hosts	6	CREATE TABLE moz_hosts (id INT
5	table	moz_bookmarks	moz_bookmarks	8	CREATE TABLE moz_bookmarks (id
6	table	moz_keywords	moz_keywords	9	CREATE TABLE moz_keywords (id
7	table	sqlite_sequence	sqlite_sequence	11	CREATE TABLE sqlite_sequence(nam
8	table	moz_anno_attributes	moz_anno_attributes	12	CREATE TABLE moz_anno_attributes
9	table	moz_annos	moz_annos	14	CREATE TABLE moz_annos (id INT
10	table	moz_items_annos	moz_items_annos	15	CREATE TABLE moz_items_annos (
11	table	sqlite_stat1	sqlite_stat1	16	CREATE TABLE sqlite_stat1(tbl,id
12	table	moz_bookmarks_deleted	moz_bookmarks_deleted	17	CREATE TABLE moz_bookmarks_delet
13	table	moz_meta	moz_meta	19	CREATE TABLE moz_meta (key TEXT
14	table	moz_origins	moz_origins	20	CREATE TABLE moz_origins (id IN
15	table	moz_places_metadata	moz_places_metadata	22	CREATE TABLE moz_places_metadata
16	table	moz_places_metadata_search_queries	moz_places_metadata_search_queries	23	CREATE TABLE moz_places_metadata
17	table	moz_places_metadata_snapshots	moz_places_metadata_snapshots	25	CREATE TABLE moz_places_metadata
18	table	moz_places_metadata_snapshots_extra	moz_places_metadata_snapshots_extra	26	CREATE TABLE moz_places_metadata
19	table	moz_places_metadata_snapshots_groups	moz_places_metadata_snapshots_groups	27	CREATE TABLE moz_places_metadata
20	table	moz_places_metadata_groups_to_snapshots	moz_places_metadata_groups_to_snapshots	28	CREATE TABLE moz_places_metadata
21	table	moz_session_metadata	moz_session_metadata	29	CREATE TABLE moz_session_metadat



Investigating places.sqlite



```
SELECT * FROM moz_places
WHERE lower(title) LIKE "%hack%"
AND lower(title) LIKE "%difo%";
```

	in the state of t	title \$.⊞ frecency ≎	<pre>■ last_visit_date ‡</pre>	I≣ visit_count ≎
1	322824 https://moodle-thu.de/pluginfile.php/122070/mod_resource/c	Zielstellung - 2022 DIFO FirstHacks.pdf	26	1649192786731000	2
2	326423 https://moodle-thu.de/pluginfile.php/122070/mod_resource/c	Zielstellung - 2022 DIFO FirstHacks.pdf	50	1649752066616000	2
3	330392 https://moodle-thu.de/mod/forum/discuss.php?d=18811#p23225	DIFO: Save your date for your first hack	20	1651043387249000	2
4	332733 https://moodle-thu.de/mod/resource/view.php?id=94312&force	DIFO: List of chosen hacks (round#1)	555	1652080844932000	3
5	332734 https://moodle-thu.de/mod/forum/discuss.php?d=18918#p23355	DIFO: First Round of hacks starts tomorro…	49	1652086049138000	2
6	334617 https://moodle-thu.de/mod/assign/view.php?id=56254	DIFO: Task #5 Upload a PDF and a DOCX fil	561	1655719629694000	18
7	334646 https://moodle-thu.de/pluginfile.php/122070/mod_resource/c	Zielstellung - 2022 DIFO FirstHacks.pdf	53	1652080846275000	2
8	334863 https://moodle-thu.de/mod/forum/discuss.php?d=19040#p23498	DIFO: Updated agenda for Hack#1 presentat	110	1652127409404000	3
9	334864 https://moodle-thu.de/pluginfile.php/122070/mod_resource/c	Zielstellung - 2022 DIFO FirstHacks.pdf	74	1652123911319000	2
10	334865 https://moodle-thu.de/mod/folder/view.php?id=99419	DIFO: Download the reports for Hacks#1	330	1653563126426000	10
11	334996 https://moodle-thu.de/mod/assign/view.php?id=56254&action=	DIFO: Task #5 Upload a PDF and a DOCX fil	144	1652696590624000	4
12	334997 https://moodle-thu.de/mod/assign/view.php?id=56254&action=	DIFO: Task #5 Upload a PDF and a DOCX fil	116	1652696598649000	3
13	335349 https://moodle-thu.de/pluginfile.php/123332/mod_resource/c	Zielstellung - 2022 DIFO SecondHacks.pdf	51	1652350195219000	2
14	335498 https://moodle-thu.de/mod/forum/discuss.php?d=19109#p23573	DIFO: Completing the hack#1 presentations	59	1652706307547000	2
15	336380 https://moodle-thu.de/pluginfile.php/122070/mod_resource/c	Zielstellung - 2022 DIFO FirstHacks.pdf	46	1652696631656000	1
16	336417 https://moodle-thu.de/mod/forum/discuss.php?d=19040	DIFO: Updated agenda for Hack#1 presentat	46	1652706317435000	1
17	336418 https://moodle-thu.de/mod/assign/view.php?id=56255	DIFO: Task #6: Upload a PDF and a DOCX fi	291	1655820197789000	4
18	336655 https://moodle-thu.de/pluginfile.php/122070/mod_resource/c	Zielstellung - 2022 DIFO FirstHacks.pdf	47	1652788949528000	1
19	337279 https://moodle-thu.de/mod/forum/discuss.php?d=19229#p23728	DIFO: Upload your hack#1 report and selec	20	1653048172278000	1
20	338069 https://moodle-thu.de/pluginfile.php/123332/mod_resource/c	Zielstellung - 2022 DIFO SecondHacks.pdf	50	1653423835159000	1
21	338554 https://moodle-thu.de/pluginfile.php/123332/mod_resource/c	Zielstellung - 2022 DIFO SecondHacks.pdf	52	1653563123317000	1
22	340019 https://moodle-thu.de/mod/forum/discuss.php?d=19340#p23855	DIFO: Hack#2 presentations will start aft	56	1653932068998000	1



Investigating places.sqlite



```
SELECT * FROM moz_historyvisits

LEFT JOIN moz_places ON moz_historyvisits.place_id = moz_places.id

WHERE visit_date > 1655812800000000 --after 21.06.22 14:00

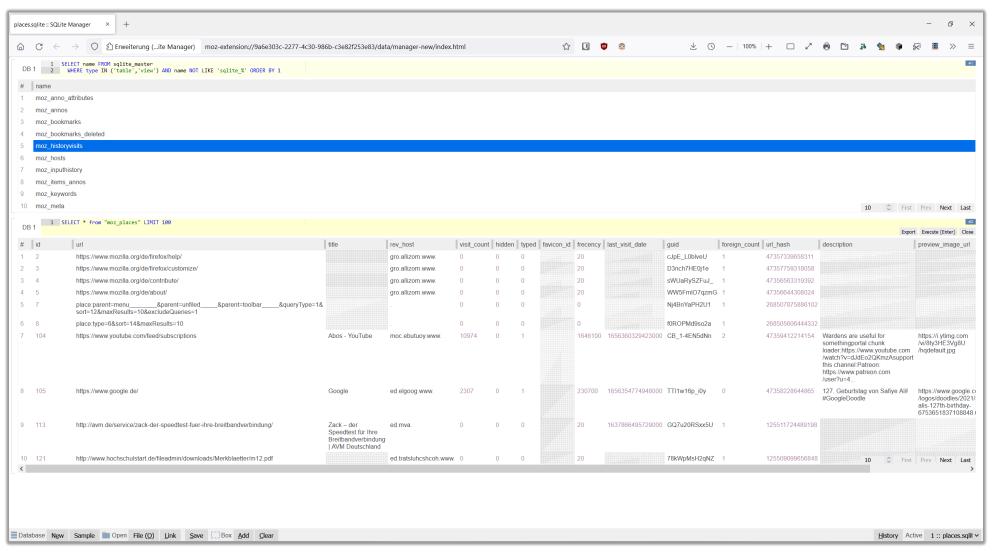
AND visit_date < 1655823600000000; --before 21.06.22 17:00</pre>
```

	■ ‡	I≣ from_visit ≎	I≣ visit_date ≎	II url ▲ 1	I≣ title
21	415743	415741	1655820214103000	https://moodle-thu.de/mod/resource/view.php?id=1	Wahl 2022: Johannes Lasi
22	415742	415741	1655820212904000	https://moodle-thu.de/mod/resource/view.php?id=1	Wahl 2022: Tim Eichler
23	415747	0	1655820788761000	https://musikschule-k-w.de/veranstaltungen/konze	Konzertnacht der Vereine – Musikschule Köngen/Wendlingen
24	415709	415708	1655813986685000	https://netzpolitik.org/2018/digitale-forensik-m	Digitale Forensik: Mit diesen sieben Programmen liest die Polizei
25	415720	415719	1655818008116000	https://ppulm.polizei-bw.de/stellenangebote/cybe	Cyberkriminalist/-in in Sonderlaufbahn (m/w/d) - Polizeipräsidium
26	415716	415715	1655816519432000	https://support.magnetforensics.com/s/	Home
27	415717	415716	1655816528090000	https://support.magnetforensics.com/s/axiom-cyber	Magnet AXIOM Cyber
28	415715	415714	1655816485340000	https://support.magnetforensics.com/s/cyber-soft	AXIOM Cyber Software and Downloads
29	415718	415717	1655816542102000	https://support.magnetforensics.com/s/cyber-soft	AXIOM Cyber Software and Downloads
30	415725	0	1655819936645000	https://thu.webex.com/join/markus.schaeffter	<null></null>
31	415713	0	1655816481371000	https://thu.webex.com/thu-en/url.php?gourl=https	Externer Standort
32	415708	0	1655813984903000	https://thu.webex.com/thu-en/url.php?gourl=https	Externer Standort
33	415714	0	1655816482283000	https://thu.webex.com/thu-en/url.php?gourl=https	Externer Standort
34	415711	0	1655816040347000	https://thu.webex.com/thu-en/url.php?gourl=https	Externer Standort
35	415726	415725	1655819936702000	https://thu.webex.com/wbxmjs/joinservice/sites/t	Cisco Webex Meetings
36	415727	415726	1655819940903000	https://thu.webex.com/webappng/sites/thu/dashboa	Cisco Webex Meetings - persönlicher Raum
37	415730	415729	1655820096942000	https://webapps.verwaltung.hs-ulm.de/polyasauth	<null></null>
38	415731	415730	1655820109210000	https://webapps.verwaltung.hs-ulm.de/polyasauth/	Anmeldung THU
39	415724	0	1655818149398000	https://www.ausbildung.de/berufe/duales-studium	Gehalt und Verdienst für das duale Studium bei der Polizei
40	415721	0	1655818124706000	https://www.google.com/search?channel=nrow5&clie	Kriminalkommissar/-in im gehobenen Polizeivollzugsdienst bw besold



Tools: SQLite Manager

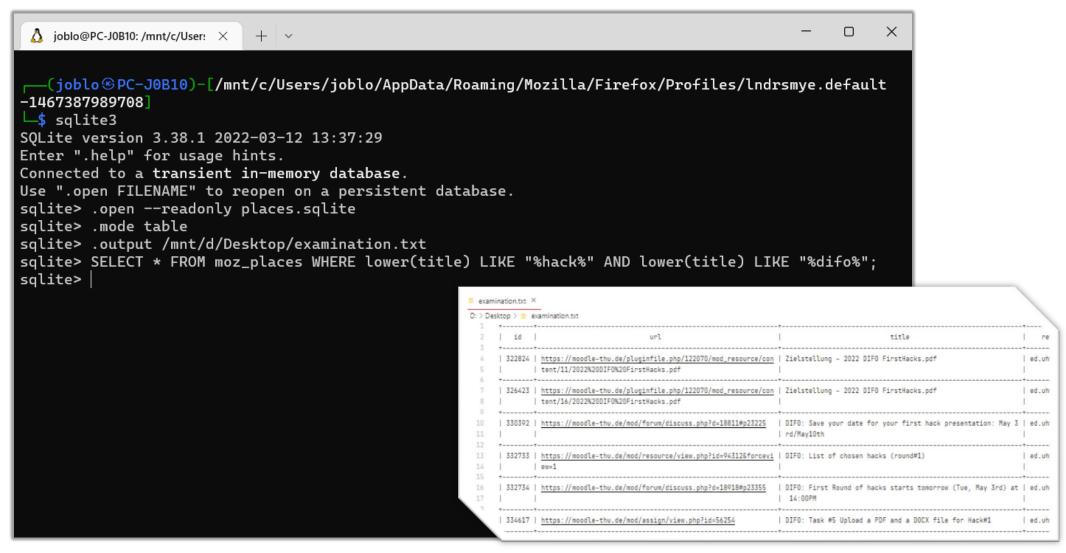






Tools: Sqlite3







Tools: Browser History Examiner



