System Software 2017-2018 Last name: Song First name: Yue Student number: R0650541 Thread stack < datamgr> Heap Thread stack < storagemgr> 602 703 room <u>Frame: <sbuffer_remove_timed></u> Id | 30 Id 20 id 10 value xx value xx value xx data next next____ next dummy ts ts XXts XX→ NULL XXlength XX XX temp thread_id 2 <u>Frame: <StormgrRead></u> 804 905 id id 40 id 50 Frame: <datamgr_parse_sensor_data> thread_id value value xx next NULL value xx id xx ts start_map data value xx ts xx ts XX<hidden> non_existing_flag ts XX NULL Thread stack < main > for main processs Frame: < DatamgrRead> id 50 id 20 value 21 next value 21 next-NULL thread_id <hidden> fp_map id 50 \ ts ts XX XX♣value 21 <u>Frame: <main></u> ts XX my_pid | 36622 child_pid 36623 fp_log **→**hidden> head cookie xx cookie magic tail sd\ Thread stack *<connmgr>* sd id 20 2 3 ip_addr\ ▼ip_addr id1 id3 →NULL value 21 port 6534 port 6534 ts XX Frame: <connmgr_listen> 127.0.0.1 thread_data thread_conn thread_stor 5 6 -1 sock fd Note: The child process does not create anything in the heap. 40 50 -1 sock_id Global data / BSS Thread stack < main > for child process list map_num 100 conn_stop mea_num 3 1 nfds curfds start_flag → <hidden> result | sqlite_ok | zErrMsg NULL server client function_data → NULL stop_flag 0 **✓**hidden fp_text NULL cond send_buf fp_log → <hidden> mutex gateway →<hidden> connfd 7 sockfd 6 epfd mutexattr listenfd mutex_fifo buffer my_pid | 36623 recv buf 4 Global data/BBS for child process. Note:fork() use COW. This happens only after the epollin|epollet Main process changed epollin epollin str_result sequence_number 5 mea_num conn_stop map_num The data. ptr ptr u32 u32 events u32 <u>Frame: <main></u> NULL 0 result zErrMsg u64 u64 u64 fd | 5 | fd | 6 child_pid 0 my_pid → NULL stop_flag fd 6 fp_text → NULL function data NULL cond Frame: < ConnmgrWrite> thread_id

NULL mutexattr

NULLbuffer

mutex_fifo