1 #include <stdio.h>

2 #include <stdlib.h>

3 #include <stdint.h>

4 #include <sqlite3.h>

5 sqlite3 \*db;

6 int status;

7 char\* zErrMsg = 0;

8 char\* query;

9 sqlite3\* db\_connection;

10 void db\_init()

11 {

12 printf("DB: Initialisierung...\n");

13 status = sqlite3\_open("skylab.db", &db\_connection);

14 if( status ){fprintf(stderr,"Error opening db: %s \n", sqlite3\_errmsg(db\_connection));}

15 query = "CREATE TABLE IF NOT EXISTS `data`(id INTEGER PRIMARY KEY, id\_msp INTEGER, " \

16 "temp\_innen1 INTEGER, temp\_innen2 INTEGER, temp\_aussen1 INTEGER," \

17 "temp\_aussen2 INTEGER, temp\_p1 INTEGER, temp\_p2 INTEGER, temp\_feuchte INTEGER, druck\_p1 INTEGER," \

18 "druck\_p2 INTEGER, rel\_luftfeuchte INTEGER, uv1 INTEGER, uv2 INTEGER," \

19 "acc\_x INTEGER, acc\_y INTEGER, acc\_z INTEGER, mag\_x INTEGER, mag\_y INTEGER," \

20 "mag\_z INTEGER, gyr\_x INTEGER, gyr\_y INTEGER, gyr\_z INTEGER, geiger INTEGER," \

21 "sauerstoff1 INTEGER, sauerstoff2 INTEGER, spectro1 INTEGER, spectro2 INTEGER," \

22 "spectro3 INTEGER,spectro4 INTEGER,spectro5 INTEGER,spectro6 INTEGER," \

23 "spectro7 INTEGER,spectro8 INTEGER,spectro9 INTEGER, Timestamp DATETIME DEFAULT CURRENT\_TIMESTAMP);";

24 status = sqlite3\_exec(db\_connection, query, 0, 0, &zErrMsg);

25 if ( status != SQLITE\_OK )

26 {

27 fprintf(stderr,"SQL error: %s \n", zErrMsg);

28 sqlite3\_free(zErrMsg);

29 }

30 }

31 void db\_insert\_measured\_data(uint32\_t\* data)

32 {

33 query = sqlite3\_mprintf("INSERT INTO `data` ( id\_msp, " \

34 "temp\_innen1, temp\_innen2, temp\_aussen1," \

35 "temp\_aussen2, temp\_p1, temp\_p2, temp\_feuchte , druck\_p1, " \

36 "druck\_p2, rel\_luftfeuchte, uv1, uv2, " \

37 "acc\_x, acc\_y, acc\_z, mag\_x, mag\_y," \

38 "mag\_z, gyr\_x, gyr\_y, gyr\_z, geiger," \

39 "sauerstoff1, sauerstoff2, spectro1, spectro2," \

40 "spectro3,spectro4,spectro5,spectro6," \

41 "spectro7,spectro8,spectro9)

VALUES(%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i,%i);"

42

,\*data,\*(data+1),\*(data+2),\*(data+3),\*(data+4),\*(data+5),\*(data+6),\*(data+7),\*(data+8),\*(data+9),\*(data+10),\*(data+11),

\*(data+12),\*(data+13),

43

\*(data+14),\*(data+15),\*(data+16),\*(data+17),\*(data+18),\*(data+19),\*(data+20),\*(data+21),\*(data+22),\*(data+23),\*(data+24

),\*(data+25),\*(data+26),

44 \*(data+27),\*(data+28),\*(data+29),\*(data+30),\*(data+31),\*(data+32),\*(data+33));

45 status = sqlite3\_exec(db\_connection, query, 0, 0, &zErrMsg);

46 if ( status != SQLITE\_OK )

47 {

48 fprintf(stderr,"SQL error while inserting: %s \n", zErrMsg);

49 sqlite3\_free(zErrMsg);

50 sqlite3\_free(query);

51 }

52

53 }