Jeremiah Webb Workshop 8

Task 1

1. TEST\_ASSERT\_EQUAL\_UINT16 (expected, actual)

2. TEST\_ASSERT\_EQUAL\_INT16 (expected, actual)

3. TEST\_ASSERT\_EQUAL\_UINT32 (expected, actual)

4. TEST\_ASSERT\_EQUAL\_INT32 (expected, actual)

Code Snippet

void test\_swap\_c\_1(void) {

uint32\_t a1[] = {0xFFFFFFFE, 3};

uint32\_t a2[] = {3, 0xFFFFFFFE};

swap\_c\_1(&a2[0], &a2[1]);

TEST\_ASSERT\_EQUAL\_UINT32\_ARRAY(a1, a2, 2);

uint32\_t a3[] = {0xFFFFFFF0, 3};

uint32\_t a4[] = {3, 0xFFFFFFF0};

swap\_c\_1(&a4[0], &a4[1]);

TEST\_ASSERT\_EQUAL\_UINT32\_ARRAY(a3, a4, 2);

//Task 2

uint32\_t x = 16;

uint32\_t b = 16;

swap\_c\_1(&x, &b);

TEST\_ASSERT\_EQUAL\_UINT16(x, b);

x = -16;

b = 16;

swap\_c\_1(&x, &b);

TEST\_ASSERT\_EQUAL\_UINT16(x, b);

}

void test\_rank\_ascending\_c(void) {

uint32\_t arr1[] = {0xDDDDDDDD, 0x12345678, 0, 0xFFFFFFFF, 0x88888888};

uint32\_t arr1asc[] = {0, 0x12345678, 0x88888888, 0xDDDDDDDD, 0xFFFFFFFF};

rank\_ascending\_c(arr1, 5);

TEST\_ASSERT\_EQUAL\_UINT32\_ARRAY(arr1asc, arr1, 5);

uint32\_t arr2[] = {1, 3, 5, 7, 2, 4, 6, 8};

uint32\_t arr3[] = {-1, 3, -5, 7, -2, 4, -6, 8};

rank\_ascending\_c(arr2, 8);

TEST\_ASSERT\_EQUAL\_UINT32\_ARRAY(arr3, arr2, 8);

}

void test\_rank\_desending\_c(void) {

uint32\_t arr1[] = {0xDDDDDDDD, 0x12345678, 0, 0xFFFFFFFF, 0x88888888};

uint32\_t arr1des[] = {0xFFFFFFFF, 0xDDDDDDDD, 0x88888888, 0x12345678, 0};

rank\_descending\_c(arr1, 5);

TEST\_ASSERT\_EQUAL\_UINT32\_ARRAY(arr1des, arr1, 5);

uint32\_t arr2[] = {1, 3, 5, 7, 2, 4, 6, 8};

uint32\_t arr3[] = {-1, 3, -5, 7, -2, 4, -6, 8};

rank\_descending\_c(arr2, 8);

TEST\_ASSERT\_EQUAL\_UINT32\_ARRAY(arr3, arr2, 8);

}

void test\_swap\_c\_1\_fail(void){

uint32\_t a1[] = {1, 3};

uint32\_t a2[] = {3, 2};

swap\_c\_1(&a2[0], &a2[1]);

TEST\_ASSERT\_EQUAL\_UINT32\_ARRAY(a1, a2, 2);

}

int main(void) {

UNITY\_BEGIN();

RUN\_TEST(test\_swap\_c\_1);

RUN\_TEST(test\_rank\_ascending\_c);

RUN\_TEST(test\_rank\_desending\_c);

RUN\_TEST(test\_swap\_c\_1\_fail);

UNITY\_END();

while(1);

}

Graphical user interface, application

Description automatically generated with medium confidenceScreenshot of Results