

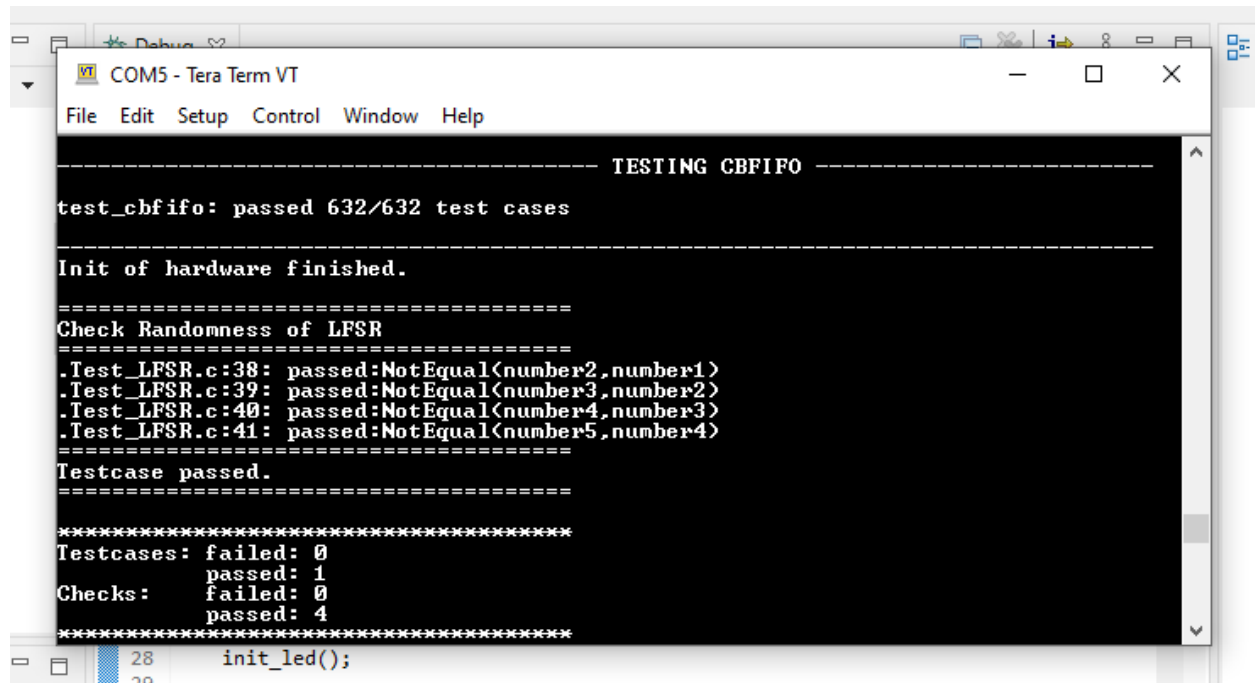
TEST REPORT

Automated Tests

uCUnit framework was used to perform automated testing of project. Automated tests were used to test implementation of Linear feedback Shift Register method (LFSR) and generated random password(OTP).

Following are the screenshots for these tests –

1) Testing randomness of LFSR implementation



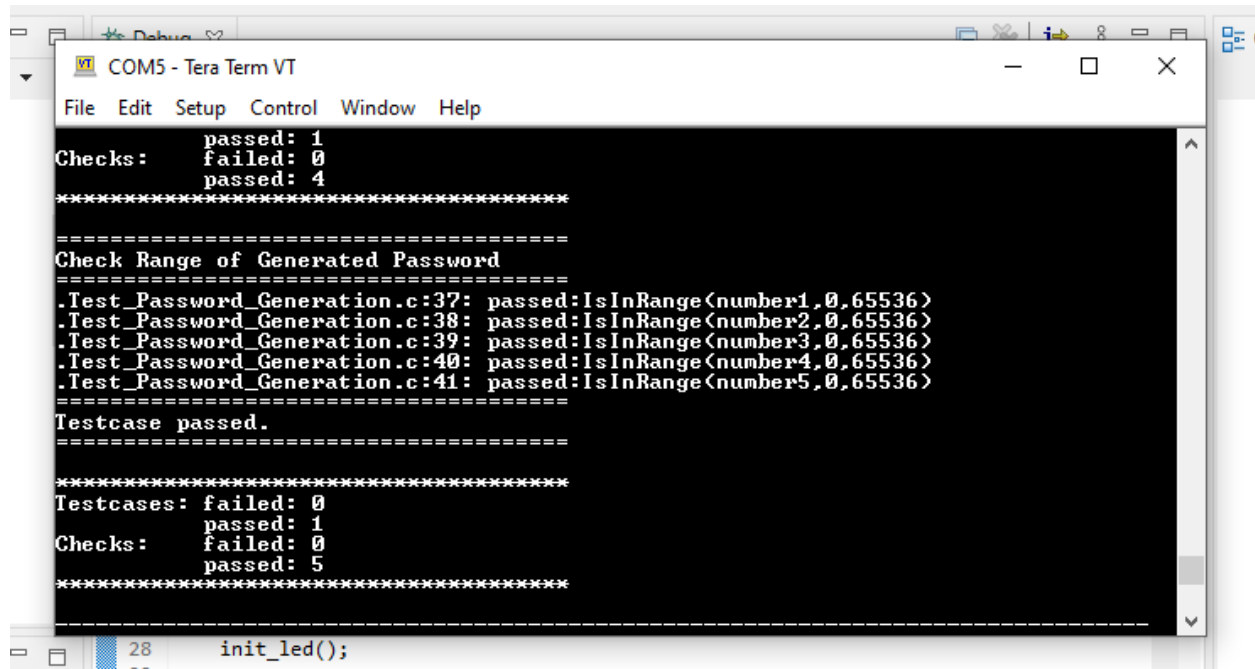
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File Edit Setup Control Window Help

----- TESTING CBFIFO -----

test_cbfifo: passed 632/632 test cases

-----
Init of hardware finished.
=====
Check Randomness of LFSR
=====
.Test_LFSR.c:38: passed:NotEqual(number2,number1)
.Test_LFSR.c:39: passed:NotEqual(number3,number2)
.Test_LFSR.c:40: passed:NotEqual(number4,number3)
.Test_LFSR.c:41: passed:NotEqual(number5,number4)
=====
Testcase passed.
=====
*****
Testcases: failed: 0
           passed: 1
Checks:    failed: 0
           passed: 4
*****
28      init_led();
29
```

2) Testing range of generated password



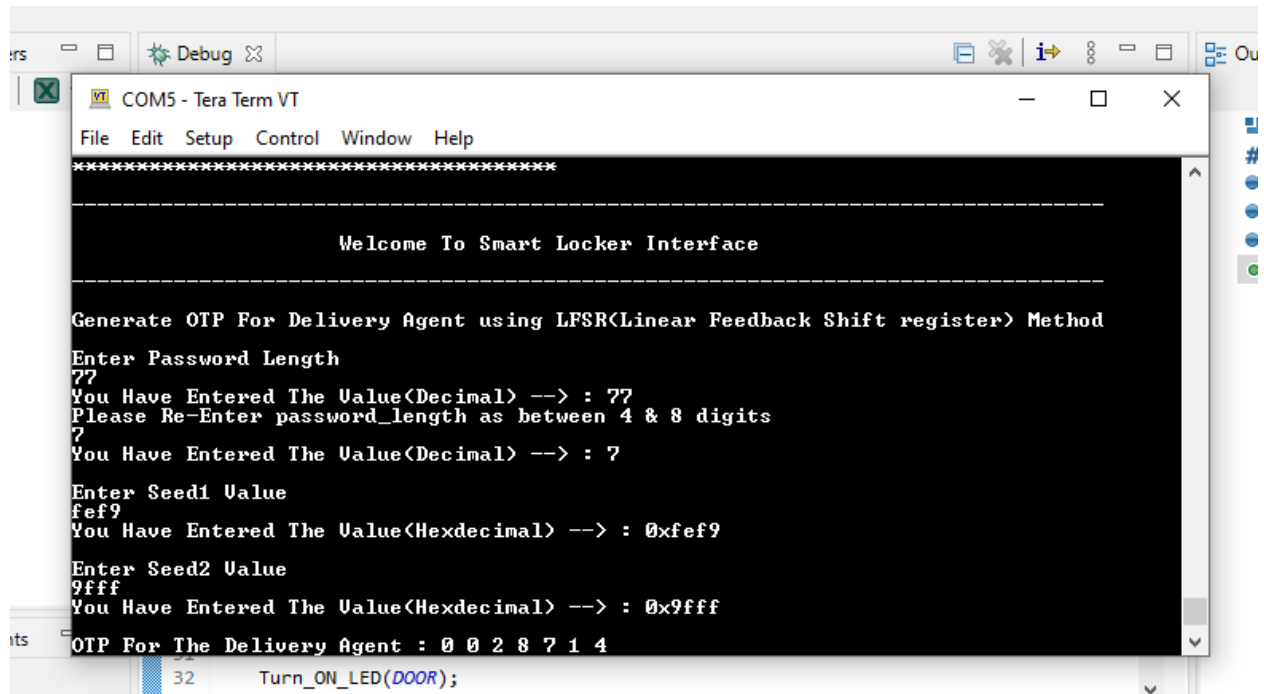
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Checks:    passed: 1
           failed: 0
           passed: 4
*****
=====
Check Range of Generated Password
=====
.Test_Password_Generation.c:37: passed:IsInRange(number1,0,65536)
.Test_Password_Generation.c:38: passed:IsInRange(number2,0,65536)
.Test_Password_Generation.c:39: passed:IsInRange(number3,0,65536)
.Test_Password_Generation.c:40: passed:IsInRange(number4,0,65536)
.Test_Password_Generation.c:41: passed:IsInRange(number5,0,65536)
=====
Testcase passed.
=====
*****
Testcases: failed: 0
           passed: 1
Checks:    failed: 0
           passed: 5
*****
28      init_led();
29
```

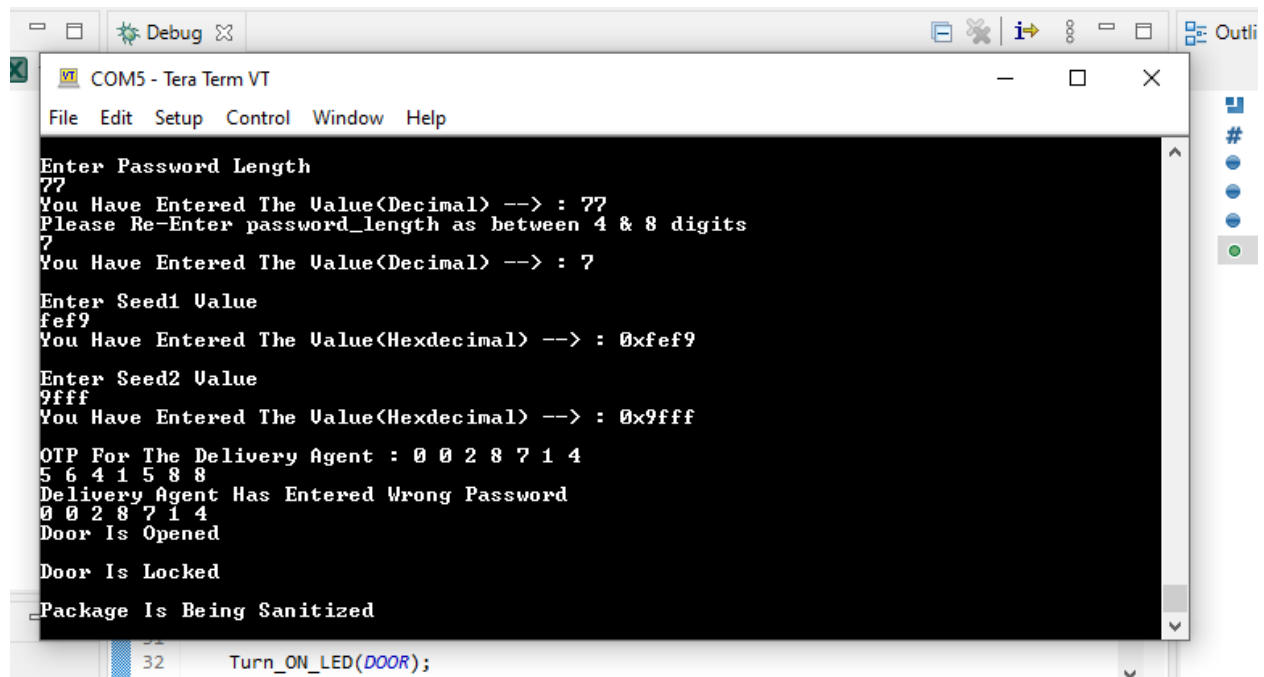
Manual Tests

Manual test in the project consisted of physically testing sensors and other hardware in the project. In addition to the test shown in the demonstration video following are screenshots for various inputs to the system.

1) 7 digit Password

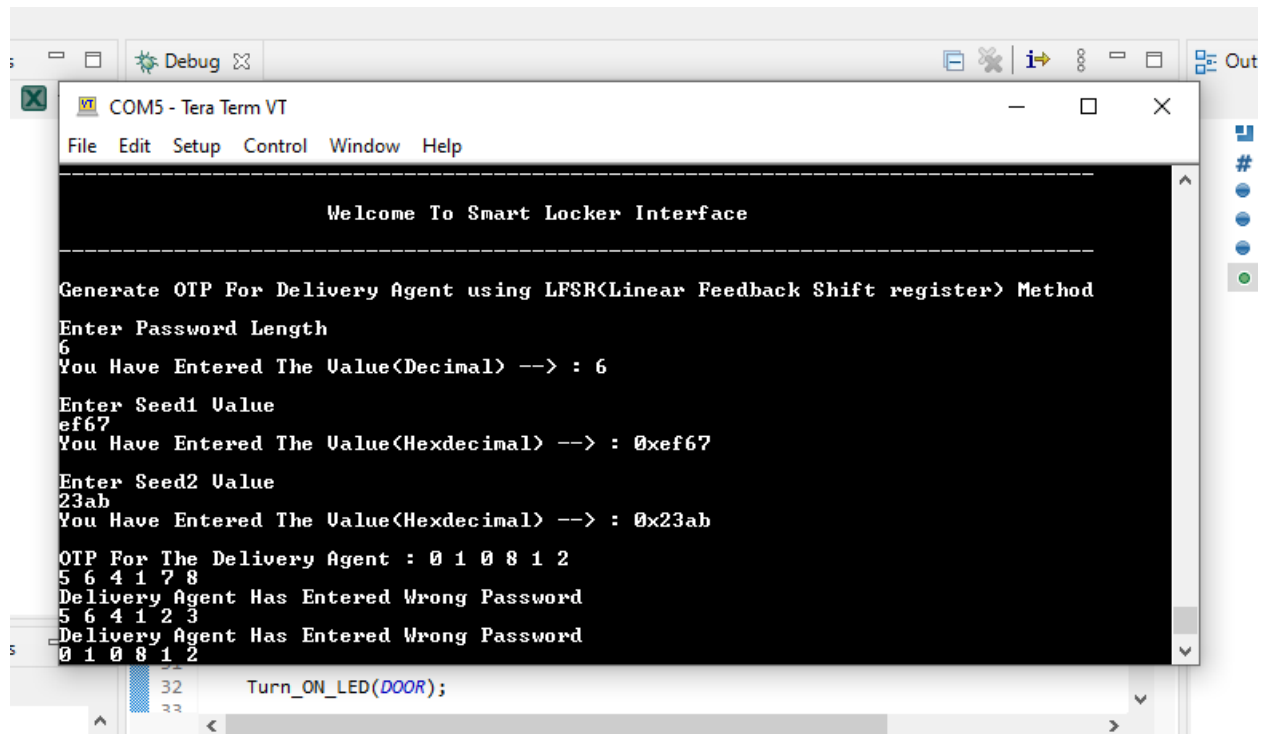


```
COM5 - Tera Term VT
File Edit Setup Control Window Help
*****
Welcome To Smart Locker Interface
*****
Generate OTP For Delivery Agent using LFSR(Linear Feedback Shift register) Method
Enter Password Length
??
You Have Entered The Value(Decimal) --> : 77
Please Re-Enter password_length as between 4 & 8 digits
?
You Have Entered The Value(Decimal) --> : 7
Enter Seed1 Value
fef9
You Have Entered The Value(Hexdecimal) --> : 0xfef9
Enter Seed2 Value
9fff
You Have Entered The Value(Hexdecimal) --> : 0x9fff
OTP For The Delivery Agent : 0 0 2 8 7 1 4
32 Turn_ON_LED(DOOR);
```



```
COM5 - Tera Term VT
File Edit Setup Control Window Help
Enter Password Length
??
You Have Entered The Value(Decimal) --> : 77
Please Re-Enter password_length as between 4 & 8 digits
?
You Have Entered The Value(Decimal) --> : 7
Enter Seed1 Value
fef9
You Have Entered The Value(Hexdecimal) --> : 0xfef9
Enter Seed2 Value
9fff
You Have Entered The Value(Hexdecimal) --> : 0x9fff
OTP For The Delivery Agent : 0 0 2 8 7 1 4
5 6 4 1 5 8 8
Delivery Agent Has Entered Wrong Password
0 0 2 8 7 1 4
Door Is Opened
Door Is Locked
Package Is Being Sanitized
32 Turn_ON_LED(DOOR);
```

2)6 digit Password



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COM5 - Tera Term VT
File Edit Setup Control Window Help

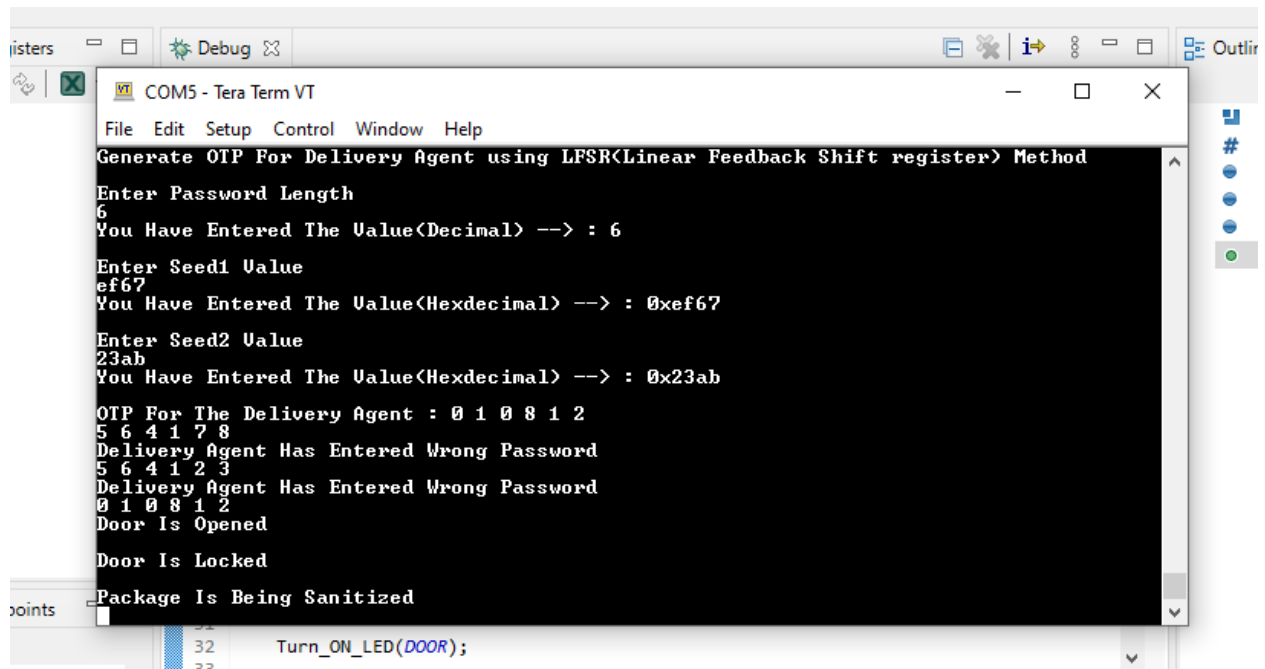
Welcome To Smart Locker Interface

-----

Generate OTP For Delivery Agent using LFSR<Linear Feedback Shift register> Method
Enter Password Length
6
You Have Entered The Value<Decimal> --> : 6
Enter Seed1 Value
ef67
You Have Entered The Value<Hexdecimal> --> : 0xef67
Enter Seed2 Value
23ab
You Have Entered The Value<Hexdecimal> --> : 0x23ab

OTP For The Delivery Agent : 0 1 0 8 1 2
5 6 4 1 7 8
Delivery Agent Has Entered Wrong Password
5 6 4 1 2 3
Delivery Agent Has Entered Wrong Password
0 1 0 8 1 2

32 Turn_ON_LED(DOOR);
33
```



```
COM5 - Tera Term VT
File Edit Setup Control Window Help

Generate OTP For Delivery Agent using LFSR<Linear Feedback Shift register> Method
Enter Password Length
6
You Have Entered The Value<Decimal> --> : 6
Enter Seed1 Value
ef67
You Have Entered The Value<Hexdecimal> --> : 0xef67
Enter Seed2 Value
23ab
You Have Entered The Value<Hexdecimal> --> : 0x23ab

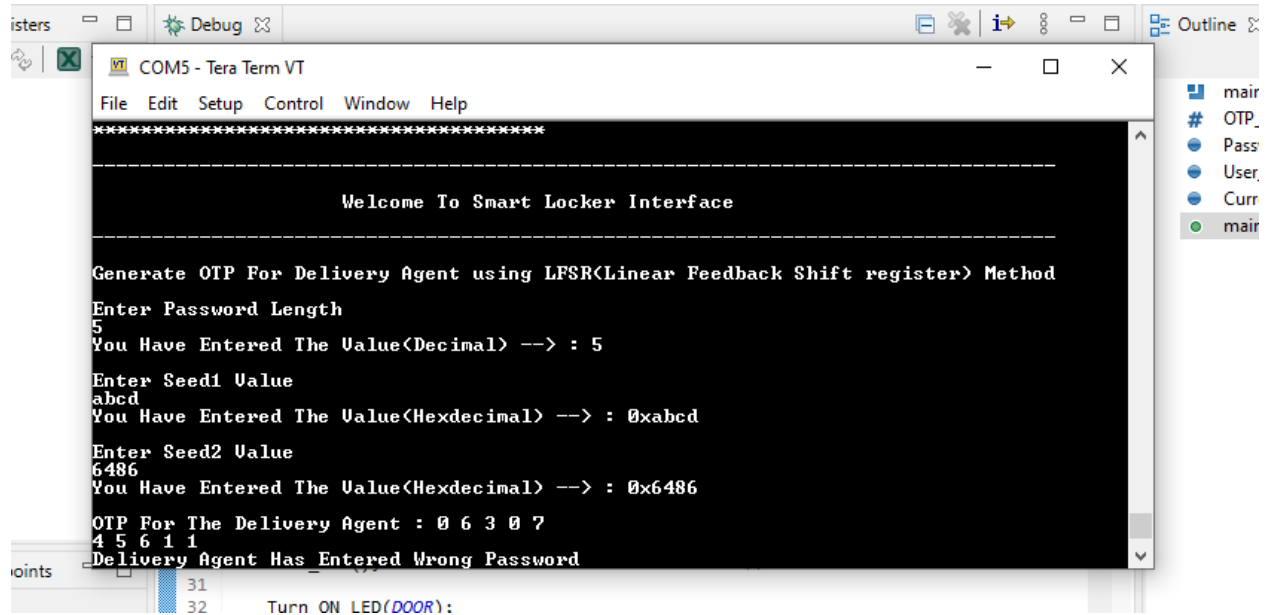
OTP For The Delivery Agent : 0 1 0 8 1 2
5 6 4 1 7 8
Delivery Agent Has Entered Wrong Password
5 6 4 1 2 3
Delivery Agent Has Entered Wrong Password
0 1 0 8 1 2
Door Is Opened

Door Is Locked

Package Is Being Sanitized

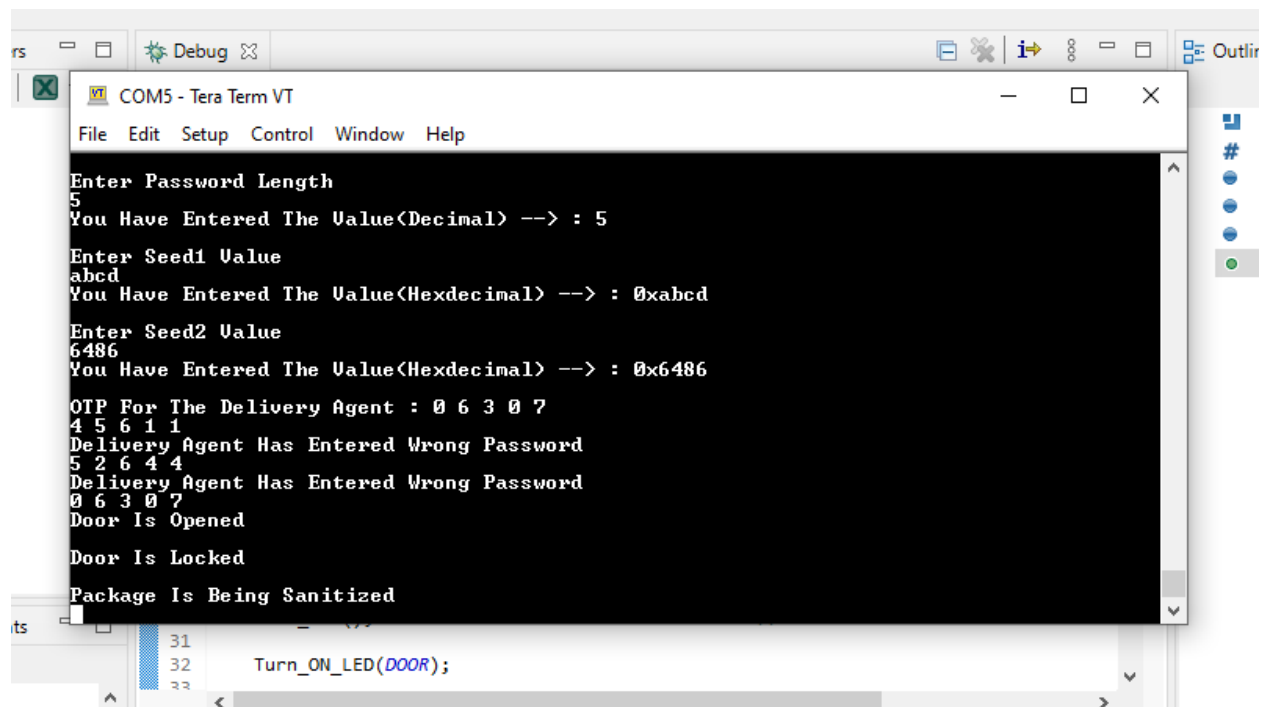
32 Turn_ON_LED(DOOR);
33
```

3)5 digit Password



```
COM5 - Tera Term VT
File Edit Setup Control Window Help
*****
-----
Welcome To Smart Locker Interface
-----

Generate OTP For Delivery Agent using LFSR(Linear Feedback Shift register) Method
Enter Password Length
5
You Have Entered The Value(Decimal) --> : 5
Enter Seed1 Value
abcd
You Have Entered The Value(Hexdecimal) --> : 0xabcd
Enter Seed2 Value
6486
You Have Entered The Value(Hexdecimal) --> : 0x6486
OTP For The Delivery Agent : 0 6 3 0 7
4 5 6 1 1
Delivery Agent Has Entered Wrong Password
```



```
COM5 - Tera Term VT
File Edit Setup Control Window Help

Enter Password Length
5
You Have Entered The Value(Decimal) --> : 5
Enter Seed1 Value
abcd
You Have Entered The Value(Hexdecimal) --> : 0xabcd
Enter Seed2 Value
6486
You Have Entered The Value(Hexdecimal) --> : 0x6486
OTP For The Delivery Agent : 0 6 3 0 7
4 5 6 1 1
Delivery Agent Has Entered Wrong Password
5 2 6 4 4
Delivery Agent Has Entered Wrong Password
0 6 3 0 7
Door Is Opened
Door Is Locked
Package Is Being Sanitized
```