1. Login attempt


```
FOR 1 to 3
        INPUT username
        INPUT password
                IF username and password matched THEN
                        access granted
                ENDIF
ENDFOR

SHOW secret question
INPUT answer
IF answer is correct THEN
        Access granted
        username and password sent to user's email
ELSE
        Access denied
ENDIF
```
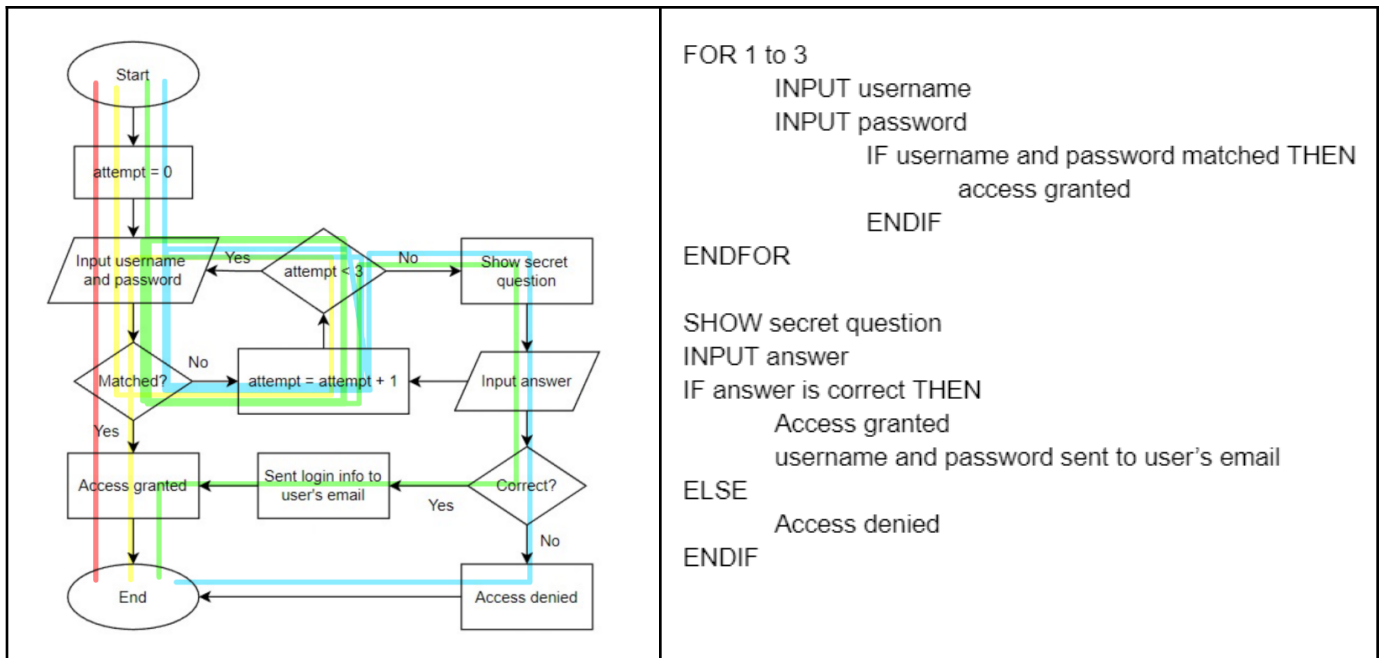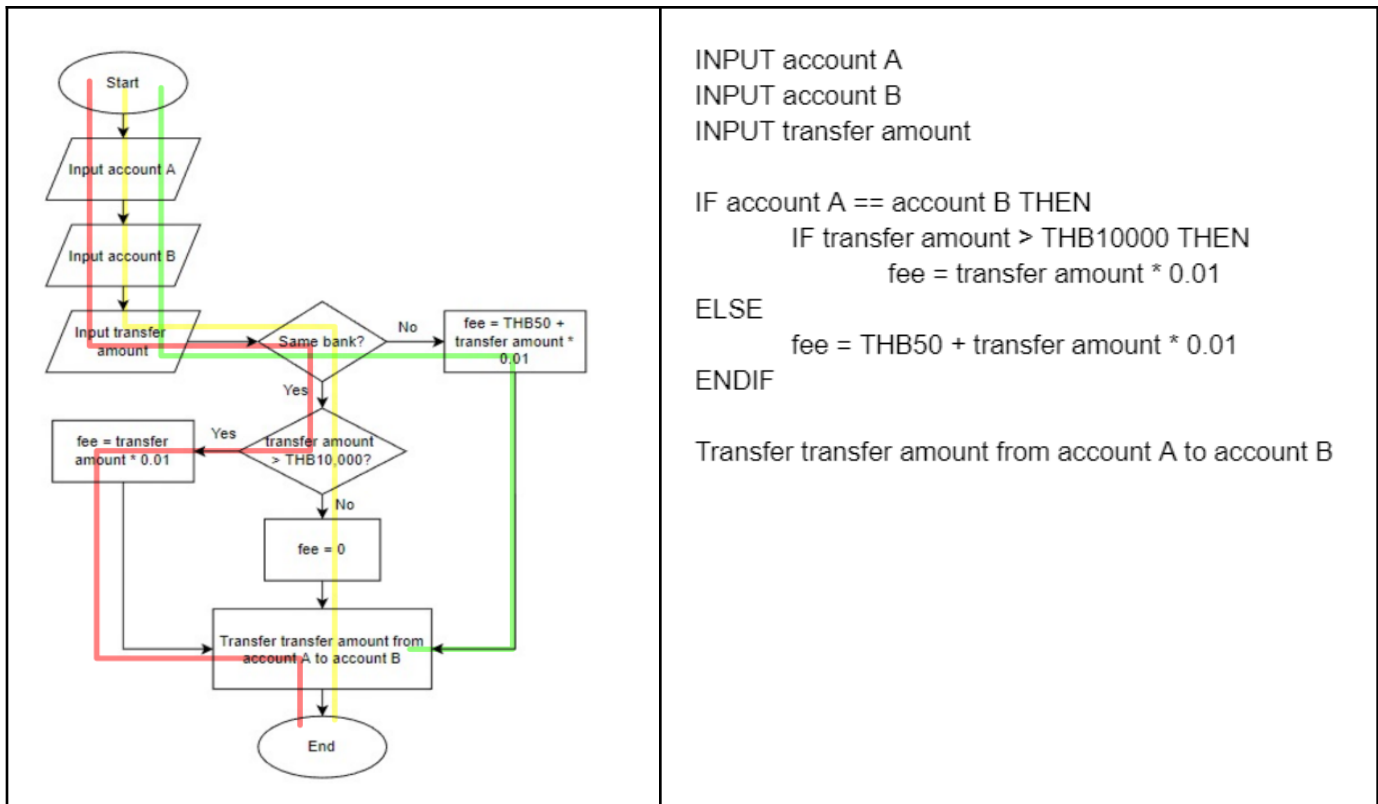
* assume that the correct username is CIE and password is 1234, correct answer to secret question is no
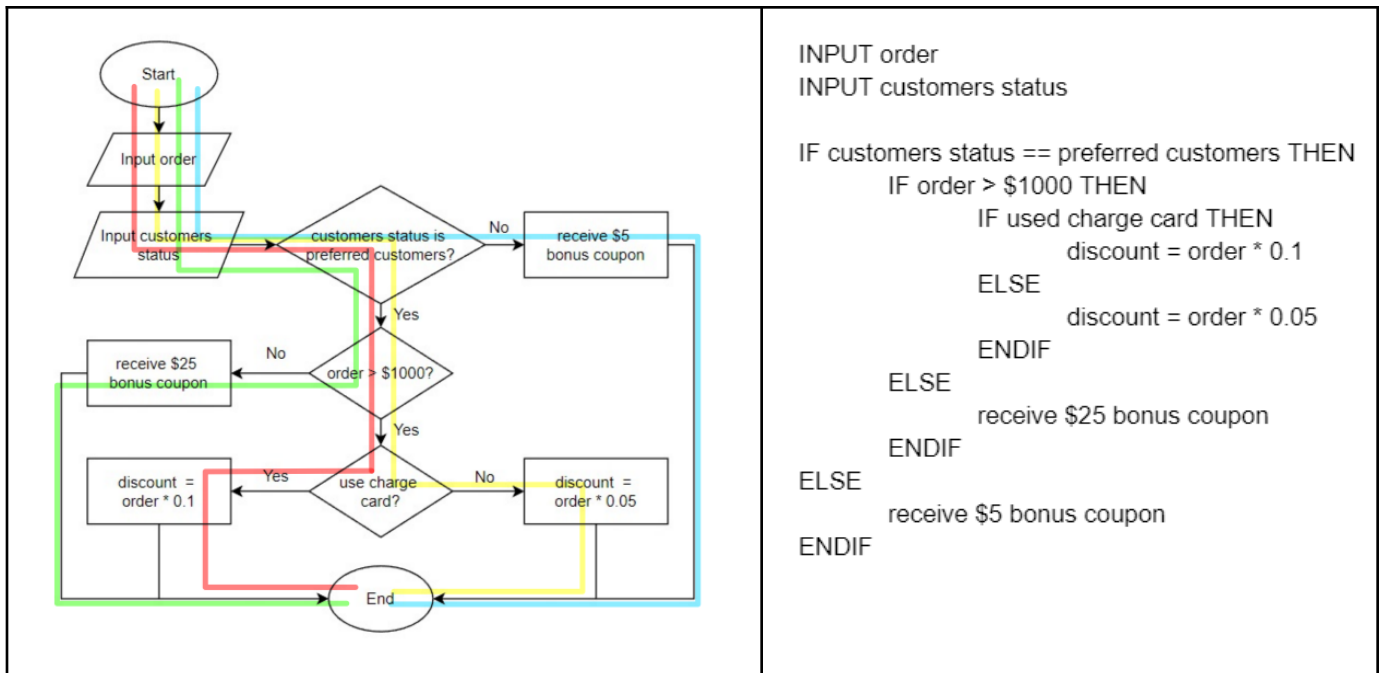
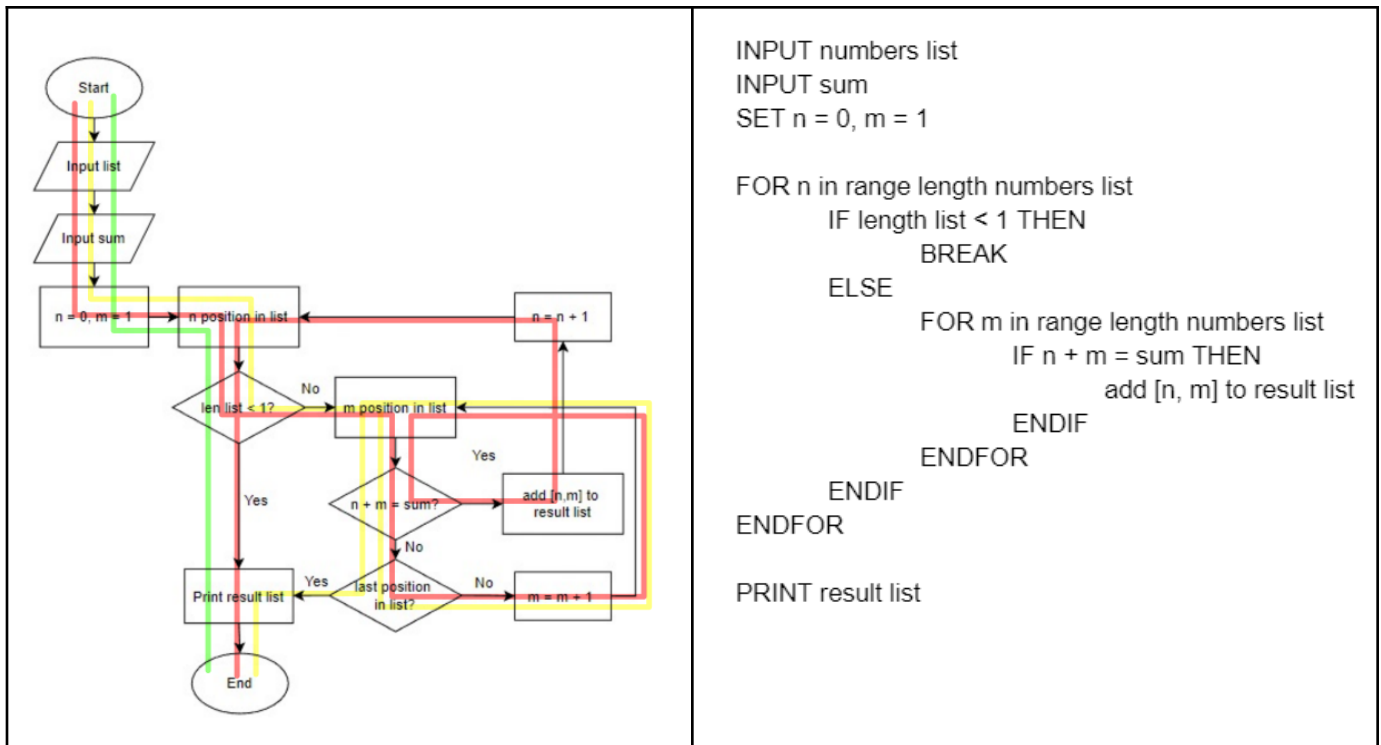| Test case	Inputs	Expected result	Coverage
Username and password matched within 3 times	- CIE, 1234	Access granted	Pseudocode lines 1-7 Flowchart red & yellow path
Username and password doesn't matched within 3 times but correct answer to secret question	- CEO, 1122 - CIE, 1122 - CIE, 1235 - no	Access granted and login info is sent to user's email	Pseudocode lines 1-12 Flowchart green path
Username and password doesn't matched within 3 times and incorrect answer to secret question	- CEO, 1122 - CIE, 1122 - CIE, 1235 - yes	Access denied	Pseudocode lines 1-15 Flowchart blue path

2. Money transfer


```
INPUT account A
INPUT account B
INPUT transfer amount

IF account A == account B THEN
        IF transfer amount > THB10000 THEN
                fee = transfer amount * 0.01
ELSE
        fee = THB50 + transfer amount * 0.01
ENDIF

Transfer transfer amount from account A to account B
```

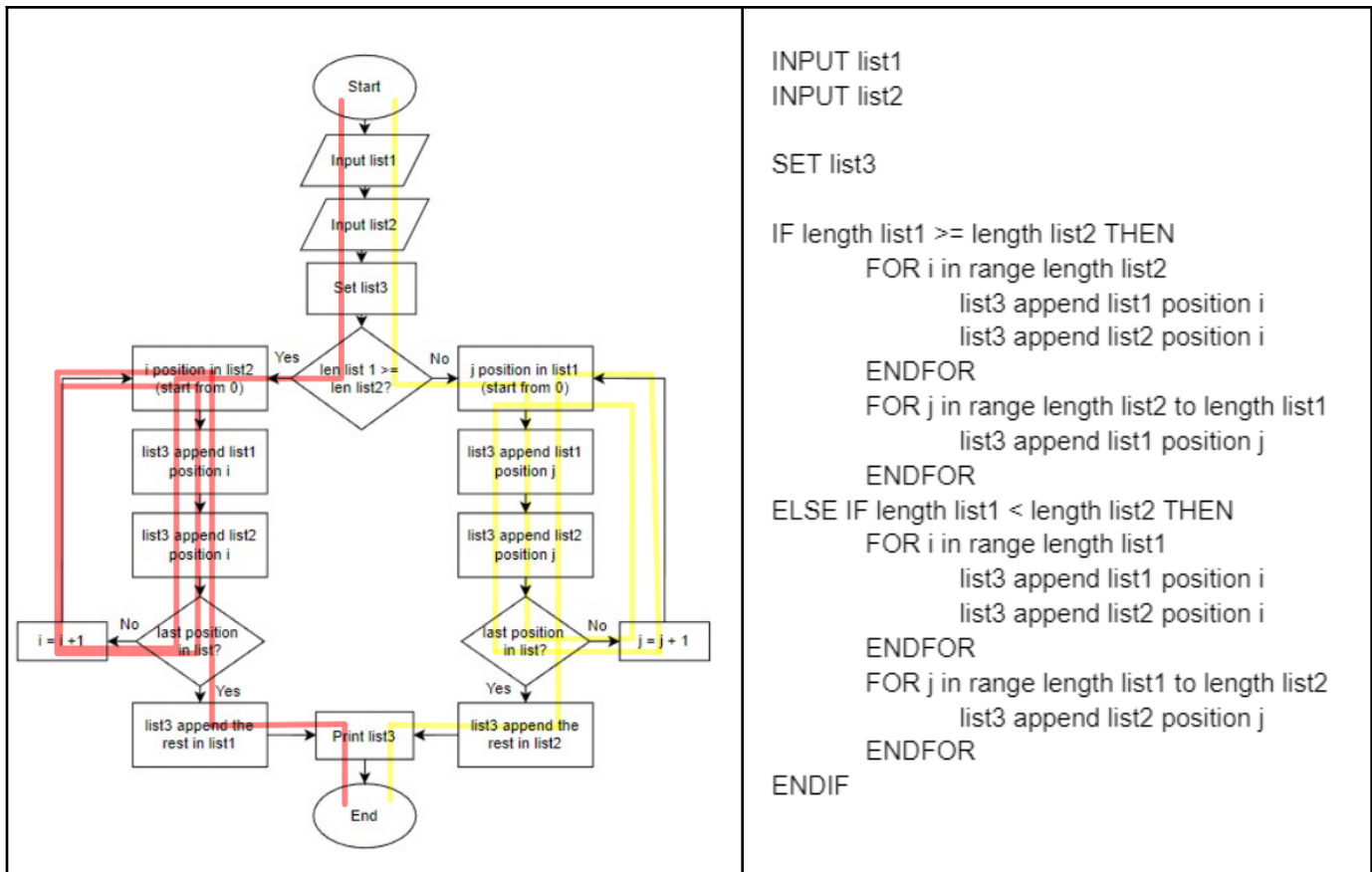| Test case	Inputs	Expected result	Coverage
Account A matched account B and transfer amount more than 10,000	- SCB - SCB - 12,000	Fee = 120	Pseudocode lines 1-6 Flowchart red path
Account A matched account B and transfer amount less than 10,000	- SCB - SCB - 5,000	Fee = 0	Pseudocode lines 1-6 Flowchart yellow path
Account A doesn't matched account B	- SCB - KBANK - 9,000	Fee = 140	Pseudocode lines 1-9 Flowchart green path

3. Sales promotion


```
INPUT order
INPUT customers status

IF customers status == preferred customers THEN
        IF order > $1000 THEN
                IF used charge card THEN
                        discount = order * 0.1
                ELSE
                        discount = order * 0.05
                ENDIF
        ELSE
                receive $25 bonus coupon
        ENDIF
ELSE
        receive $5 bonus coupon
ENDIF
```

Test case	Inputs	Expected result	Coverage
Preferred customer and order more than $1,000 and also use charge card	- $1,299 - Preferred customers - Use charge card	Discount = $129.9	Pseudocode lines 1-5 Flowchart red path
Preferred customer and order more than $1,000 but doesn't use charge card	- $1,099 - Preferred customers - Doesn't use charge card	Discount = $54.95	Pseudocode lines 1-7 Flowchart yellow path
Preferred customer and order less than or equal to $1000	- $999 - Preferred customers	Get $25 bonus coupon	Pseudocode lines 1-9 Flowchart green path
Not a preferred customers	- $500 - Regular customers	Get $5 bonus coupon	Pseudocode lines 1-13 Flowchart blue path

4. Find all pairs of numbers in a given list that sum to a given value

INPUT numbers list
INPUT sum
SET n = 0, m = 1

FOR n in range length numbers list
        IF length list < 1 THEN
                BREAK
        ELSE
                FOR m in range length numbers list
                        IF n + m = sum THEN
                                add [n, m] to result list
                        ENDIF
                ENDFOR
        ENDIF
ENDFOR

PRINT result list

Test case	Inputs	Expected result	Coverage
Uncommon numbers in list	- [1,3,5,7,9] - 10	[1,9], [3,7]	Pseudocode lines 1-11 Flowchart red path
Some common numbers in list	- [1,2,4,4,6,8] - 8	[2,6], [4,4]	Pseudocode lines 1-11 Flowchart red path
No pairs	- [2,4,6,8,10] - 7		Pseudocode lines 1-11 Flowchart yellow path
1 number in list	- [1] - 2		Pseudocode lines 1-9 Flowchart green path

5. Combine two lists by alternatingly taking elements


```
INPUT list1
INPUT list2

SET list3

IF length list1 >= length list2 THEN
        FOR i in range length list2
                list3 append list1 position i
                list3 append list2 position i
        ENDFOR
        FOR j in range length list2 to length list1
                list3 append list1 position j
        ENDFOR
ELSE IF length list1 < length list2 THEN
        FOR i in range length list1
                list3 append list1 position i
                list3 append list2 position i
        ENDFOR
        FOR j in range length list1 to length list2
                list3 append list2 position j
        ENDFOR
ENDIF
ENDIF
```

Test case	Inputs	Expected result	Coverage
Same numbers of elements between two lists	- [1,2,3,4,5] - [a,b,c,d,e]	[1,a,2,b,3,c,4,d,5,e]	Pseudocode lines 1-11 Flowchart red path
List1 have more elements than list2	- [1,2,3,4,5] - [a,b,c]	[1,a,2,b,3,c,4,5]	Pseudocode lines 1-11 Flowchart red path
List2 have more elements than list1	- [1,2,3] - [a,b,c,d,e]	[1,a,2,b,3,c,d,e]	Pseudocode lines 1-3, 12-18 Flowchart yellow path