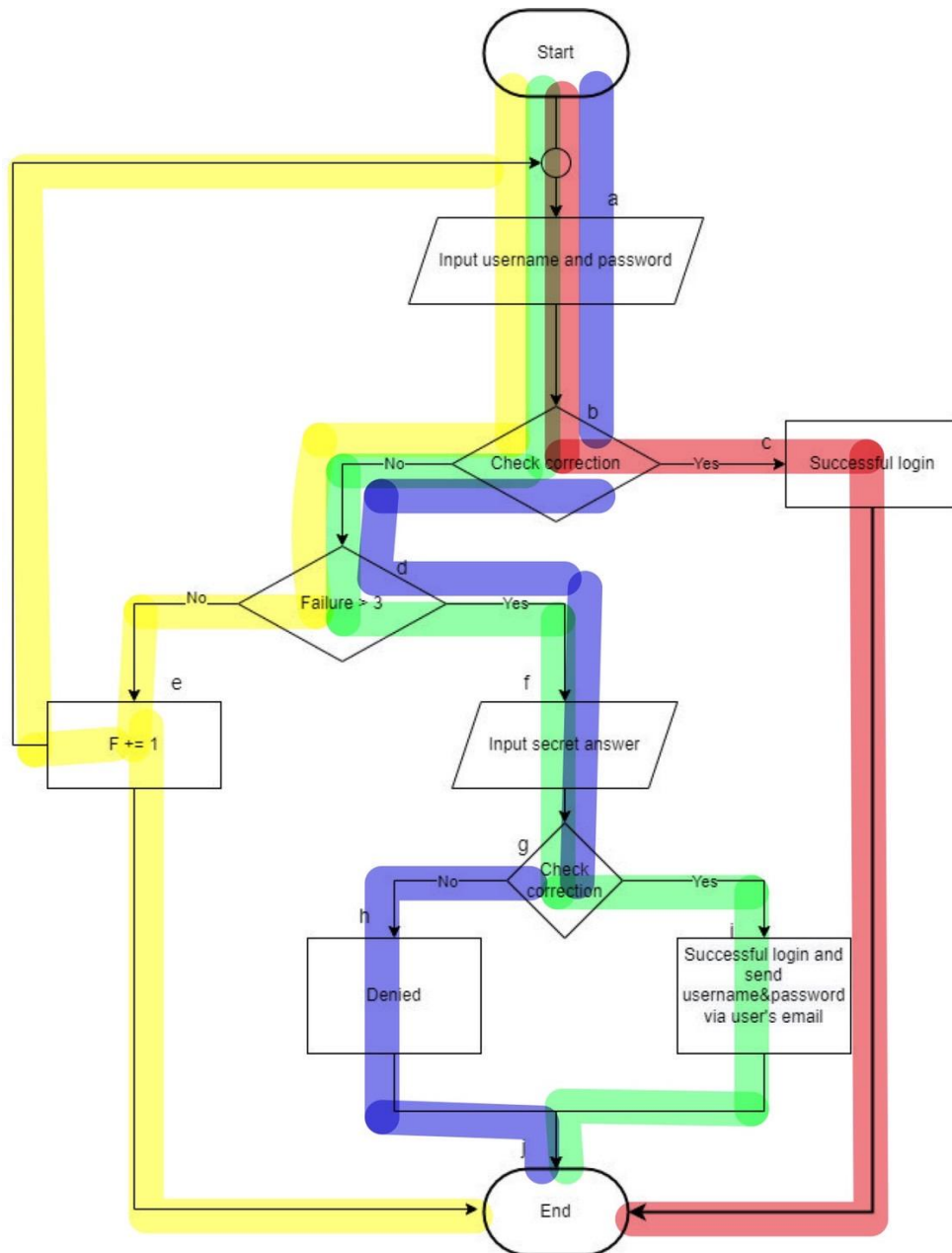


1. Login attempt  
Flowchart:



Pseudocode:

**Start**

**INPUT USERNAME, PASSWORD**

**While** F < 3

**IF** USERNAME == PASSWORD

        ACCESS GRANTED

**ELSE**

        F += 1

**ENDIF**

**ENDWHILE**

**SECRET QUESTION**

**INPUT ANSWER**

**IF ANSWER** is correct

**ACCESS GRANTED with correct USERNAME AND**

**PASSWORD**

**ELSE**

**ACCESS DENIED**

**ENDIF**

**END**

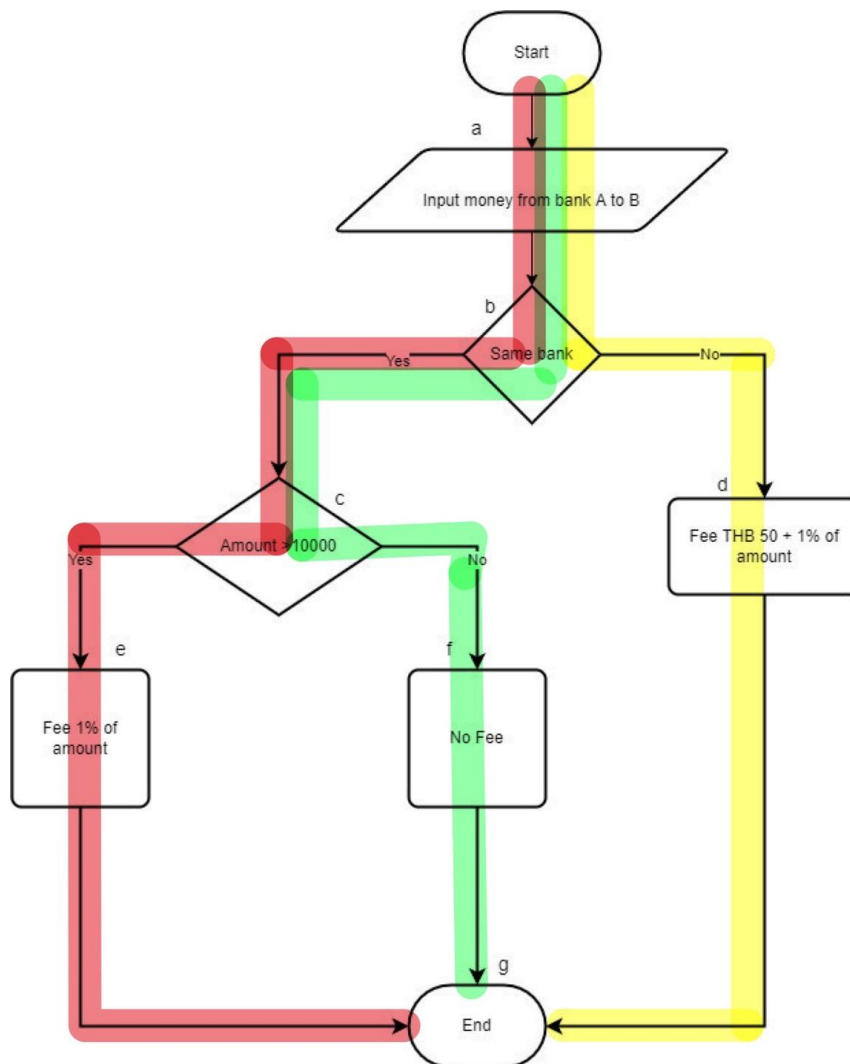
Test cases:

\*assume username and password: CIE & 12345 / secret answer is “Best major”

Test cases	Input	Expected results	Coverage
Correct login	- CIE - 12345	Successfully login	a-b-c
Fail login	- Cie - 1235	Try again 3 more times	a-b-d-e
Fail login but can login later	- CiE - 1234 - Best major	Successfully login and also got username and password via email	a-b-d-f-g-i
Fail login and answer	- cIE - 135 - Worst major	Failed to login and cannot access	a-b-d-f-g-h

## 2. Money transfer

Flowchart:



Pseudocode:

**START**

**INPUT** AMOUNT

**IF** Same Bank

**IF** Amount > 10,000

        Fee 1%

**ELSE**

        No fee

**ENDIF**

**Else**

    fee 50 THB + 1%

**ENDIF**

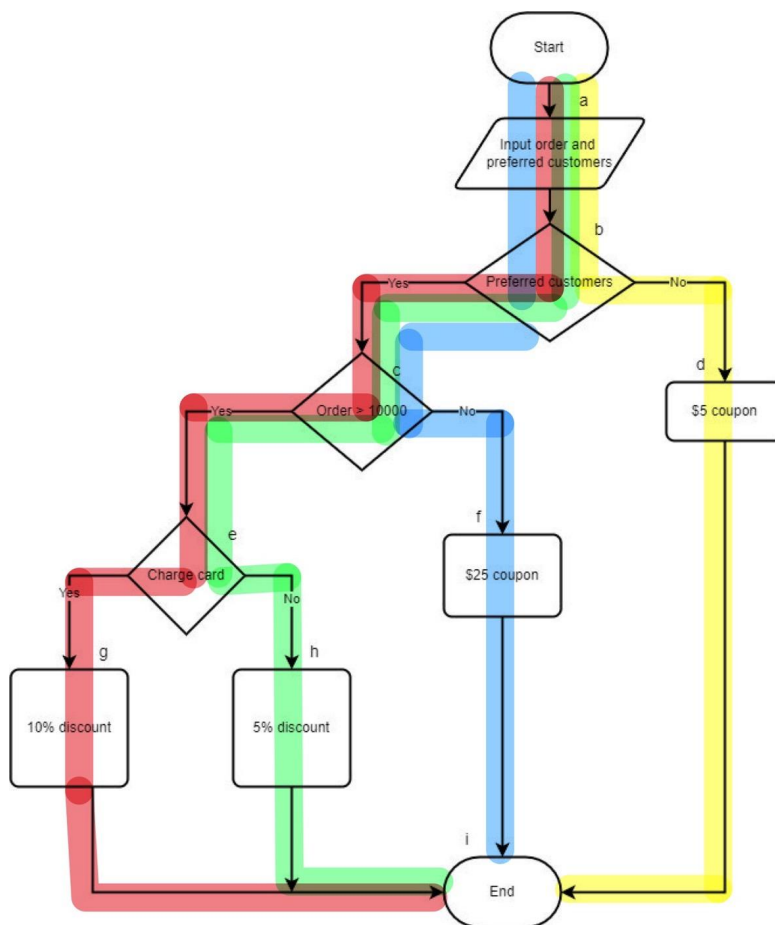
**END**

Test cases:

Test cases	Input	Expected results	Coverage
Transfer money more than 10000 THB in <b>same</b> bank	>10000 THB Same bank	Pay 1% fee	a-b-c-e-g
Transfer money less or equal than 10000 THB in <b>same</b> bank	<10000 THB Same bank	No fee	a-b-c-f-g
Transfer money more than 10000 THB in <b>different</b> bank	>10000 THB Different bank	Pay 50 THB + 1% fee	a-b-d-g
Transfer money less or equal than 10000 THB in <b>different</b> bank	< 10000 THB Different bank	Pay 50 THB + 1% fee	a-b-d-g

### 3. Sales Promotion

Flowchart:



Pseudocode:

**START**

**INPUT ORDER**

**IF** Preferred Customer

**IF** order >1,000

**IF** Charge card

            10%discount

**ELSE**

            5% discount

**ENDIF**

**ELSE**

        \$25 coupon

**ENDIF**

**ELSE**

    \$5 coupon

**ENDIF**

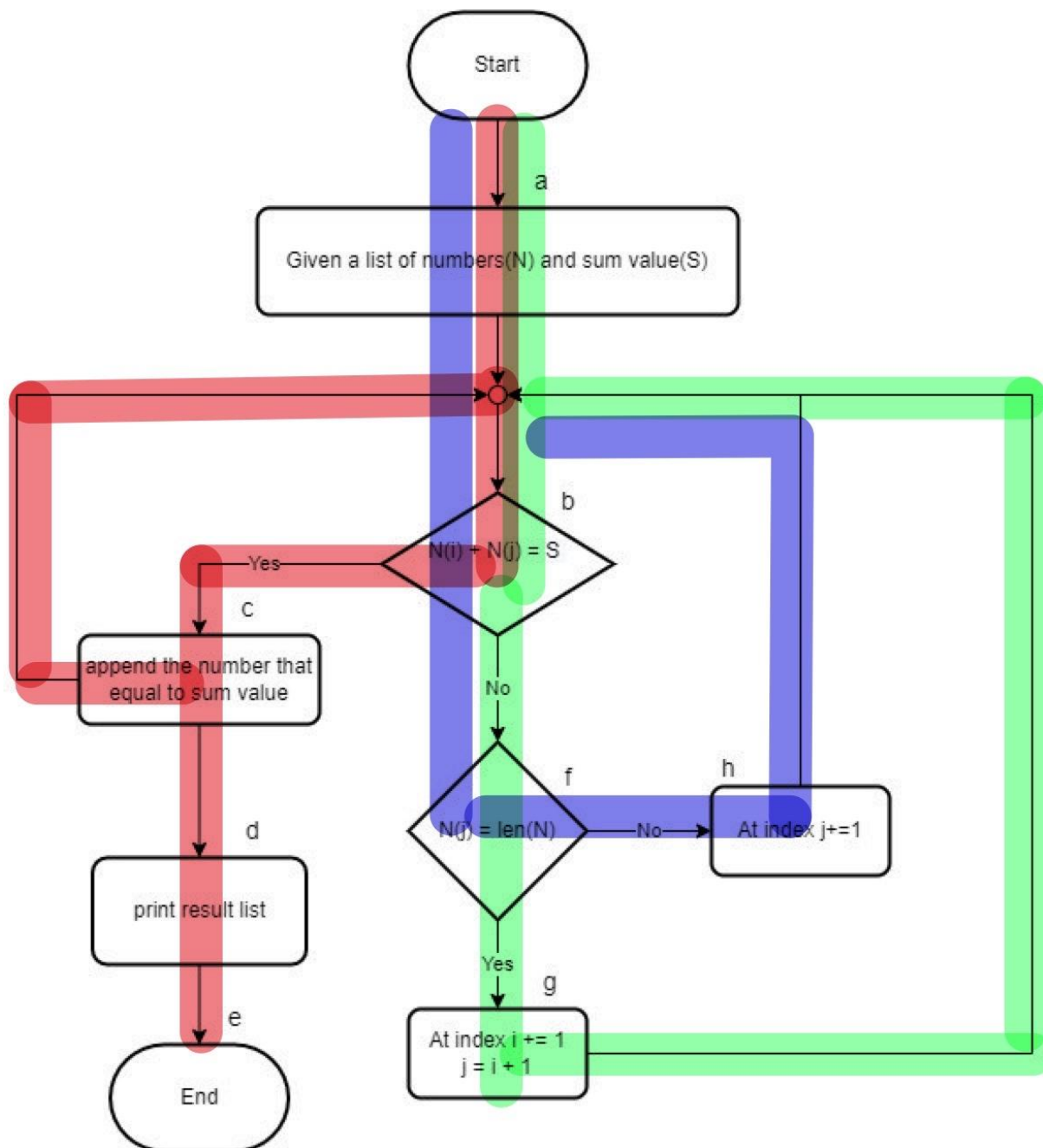
**END**

Test case:

Test cases	Input	Expected results	Coverage
Get 10% discount	Order > 1000, Preferred customer, Charged card	10% discount off	a-b-c-e-g-i
Get 5% discount	Order > 1000, Preferred customer	5% discount off	a-b-c-e-h-i
Get \$25 coupon	Order < 1000, Preferred customer	\$25 coupon	a-b-c-f-i
Get \$5 coupon	Not a preferred customer	\$5 coupon	a-b-d-i

4. Find pair numbers in given list that sum into given value

Flowchart:



Pseudocode:

**START**

**INPUT N**

**INPUT S**

**X = 0**

**Y = 0**

**WHILE X > N**

```

IF N(i) + N(j) = S
    APPEND
ELSE
    IF N(j) = len(N)
        X += 1
        Y = X + 1
    ELSE
        Y += 1
    ENDIF
ENDIF
ENDWHILE
END

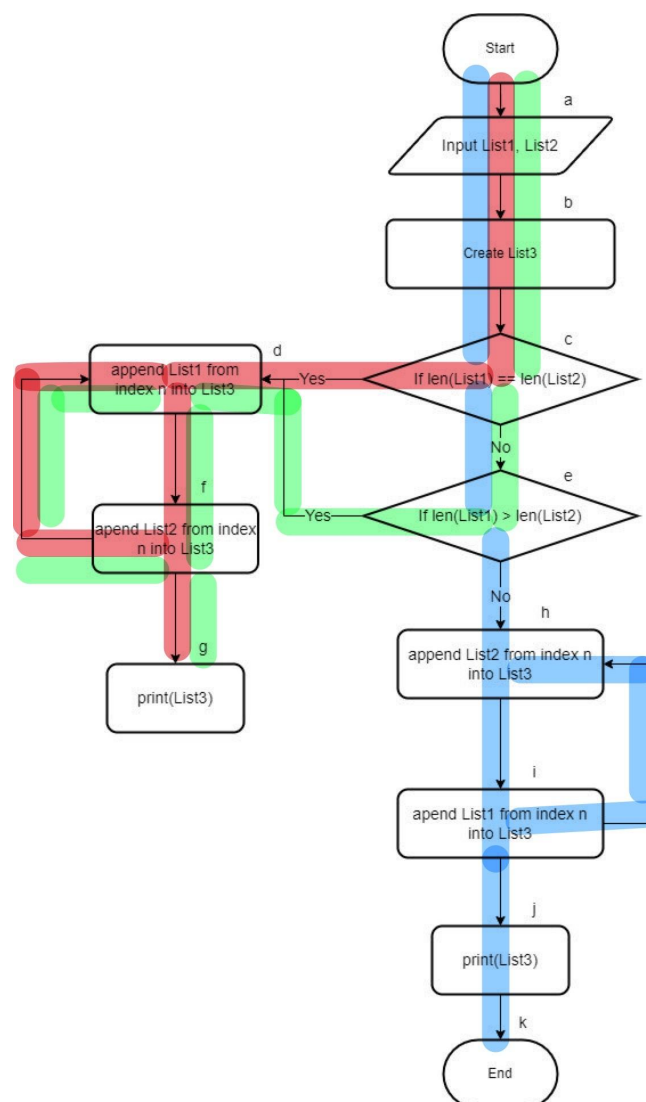
```

Test cases:

Test case	Input	Expected result	Coverage
Numbers are all even numbers	- [2, 4, 6, 8, 10, 12] - 10	- [2,8], [4,6]	a-b-c-b-c-d-e
Repetitive numbers	- [1, 1, 2, 3, 3, 4, 6, 7, 8] - 9	- [1,8], [2,7], [3,6]	a-b-c-b-c-d-e
No pair	- [6, 8, 10, 14, 16] - 10	none	a-b-f-g
1 number in list	- [2] - 3	none	a-b-f-h

## 5.Combine two lists by alternately taking elements

Flowchart:



Pseudocode:

**START**

**INPUT** List1 ,List2

**List3** =[]



```

IF len(List1) = len(List2)
    FOR N in List1
        Append(List3)
    For N in List2
        Append(List3)
    PRINT List3
    END FOR
END FOR
ENDIF
ELSEIF len(List1) > len(List2)
    FOR N in List1
        Append(List3)
    For N in List2
        Append(List3)
    PRINT List3
    END FOR
END FOR
ENDIF
ELSE
    FOR N in List2
        Append(List3)
    For N in List1
        Append(List3)
    PRINT List3
    END FOR
END FOR
ENDIF
END

```

Test case:

Test case	Input	Expected result	Coverage
Have same length	- [1,2,3,4] - [a,b,c,d]	-[1,a,2,b,3,c,4,d]	a-b-c-d-f-d-g
List1 > List2	- [1,2,3,4] - [a,b,c]	-[1,a,2,b,3,c,4]	a-b-c-e-d-f-d-g
List1 < List2	- [1,2,3]	-[a,1,b,2,c,3,d]	a-b-c-e-h-i-j

	- [a,b,c,d]		
--	-------------	--	--