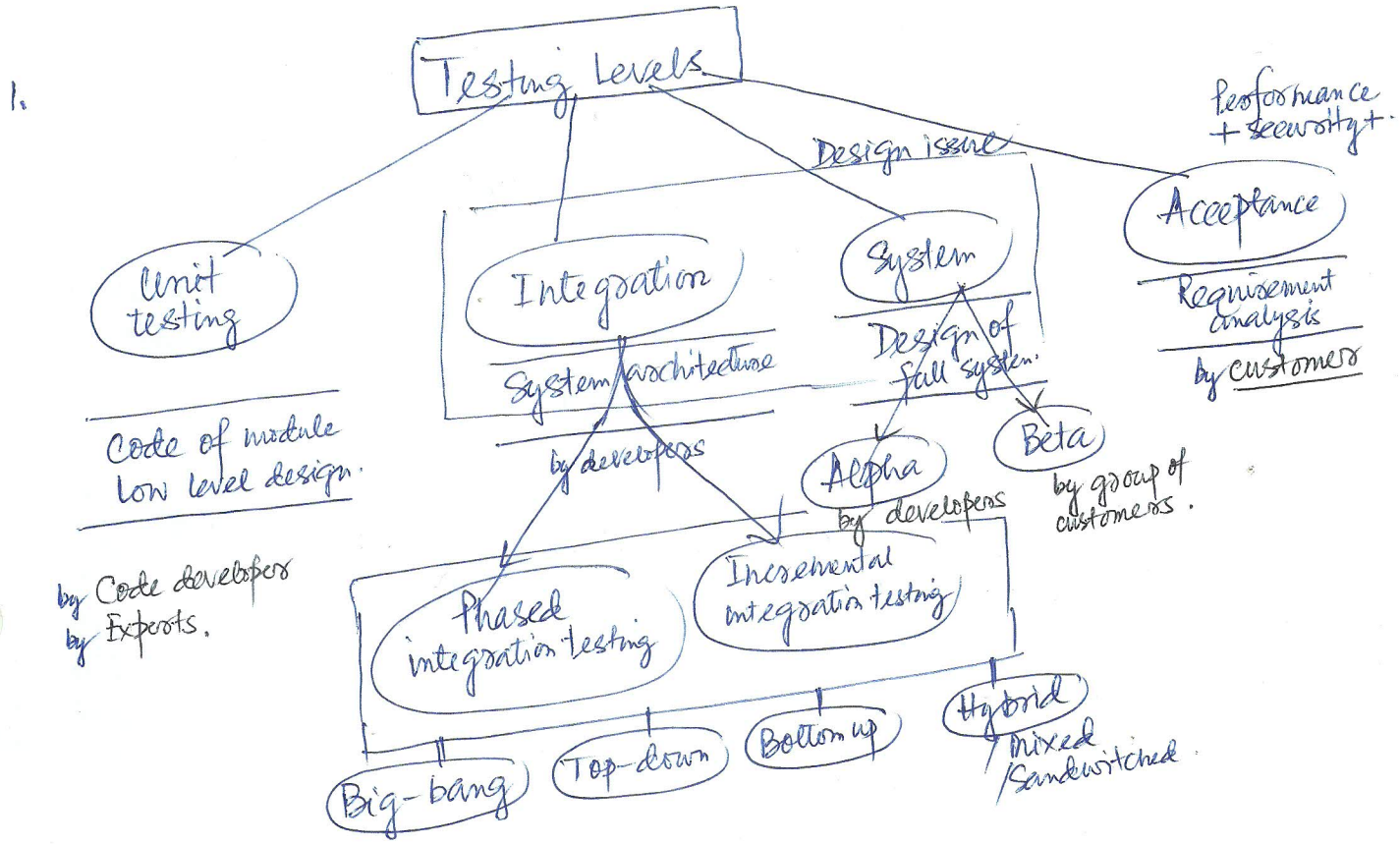
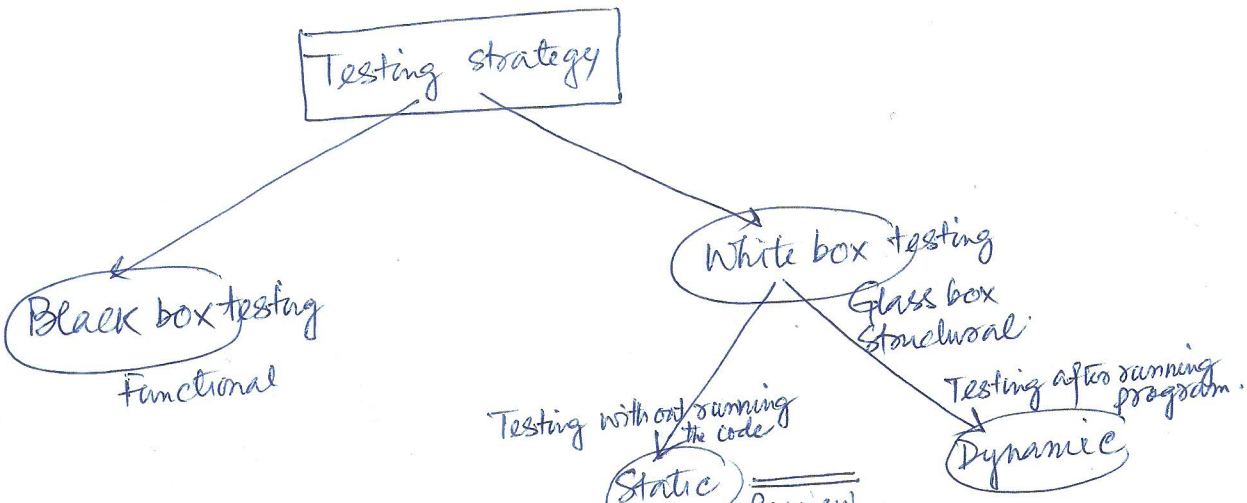
Testing

1.

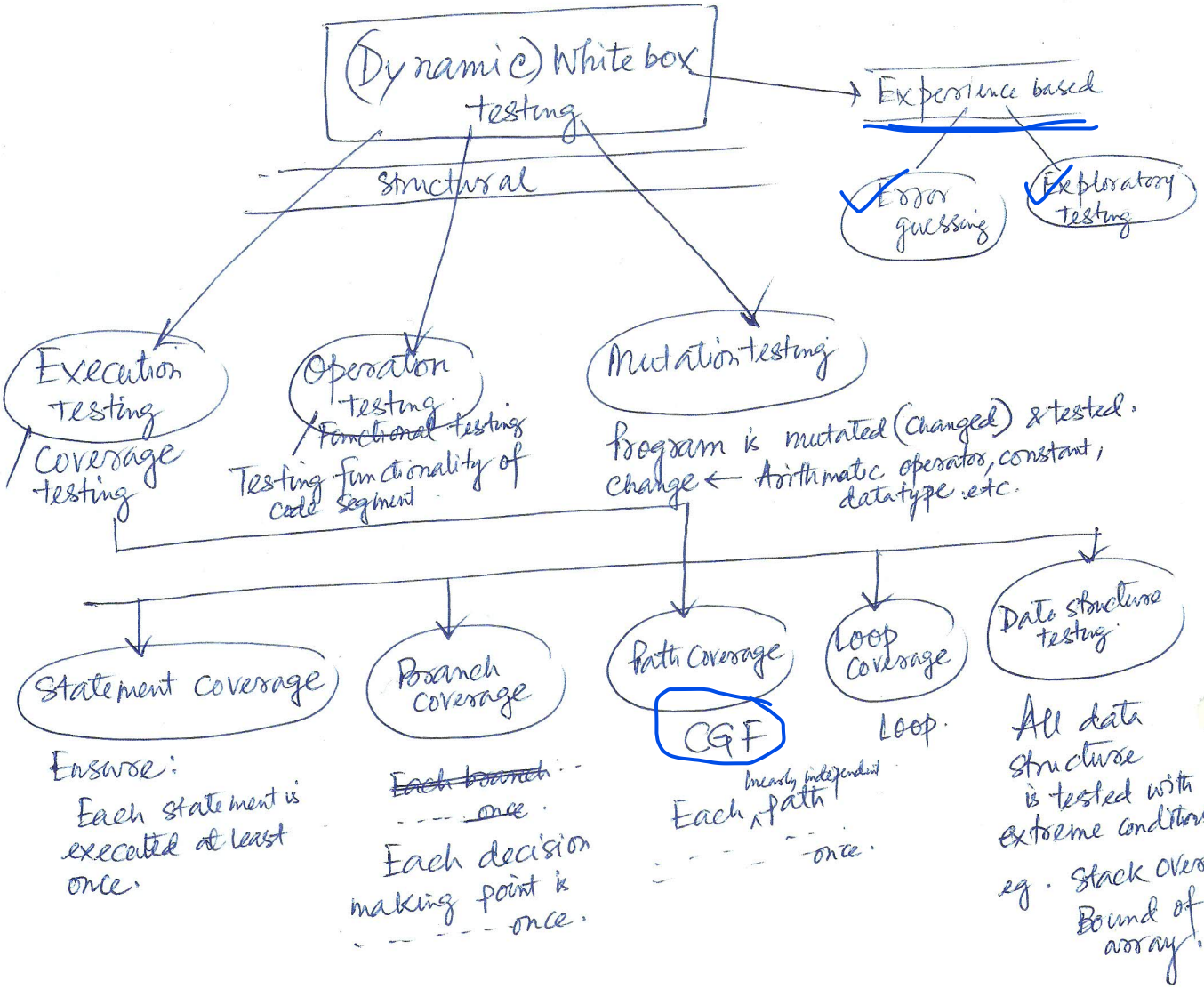


2.



3. Black box testing

- ✓ Boundary value analysis
- ✓ Equivalence class partitioning
- ✓ State transition testing
- ✓ Use case testing
- ✓ Decision tree testing
- ✓ Decision table testing
- ✓ User's story testing



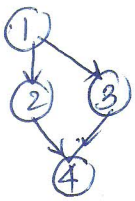
CFG (Control flow graph)

Sequence

1. a=10;
2. b=2*a-1;

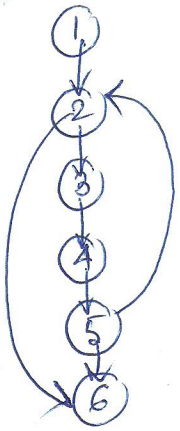
Selection

1. if(a>b)
2. c=3;
3. else c=10;
4. c=c*2;



Iteration

1. i=1;
2. while(i<=10)
3. {printf("%d",i);
4. i++;
5. }
6. i=i+10;



Data-flow testing

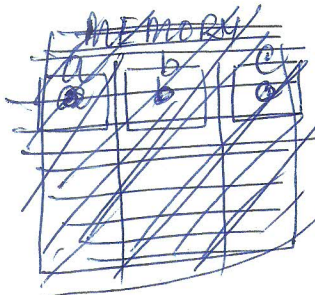
Test status of variable through paths available from CFG. It helps us to find

- variable declared but not used
- variable used but not declared
- variable declared multiple times
- variable declared ~~to~~ after use
- Deallocating variable before use.

Desk checking a program / Algorithm / Pseudocode

Dry run

```
int a,b,c;
printf ("\nEnter two numbers");
scanf ("%d %d", &a, &b);
c = a+b;
printf ("\nResult is %d", c);
```



SCREEN

Enter two numbers: 10 20
Result is 30.

MEMORY

a	b	c
10	20	30

```
i ← 1
while (i ≤ 3)
{
    x ← i+10;
    print x;
    i ← i+1;
}
```

with trace table

MEMORY

i	x
1	11
2	12
3	13
4	

Trace table

SCREEN

11 12 13

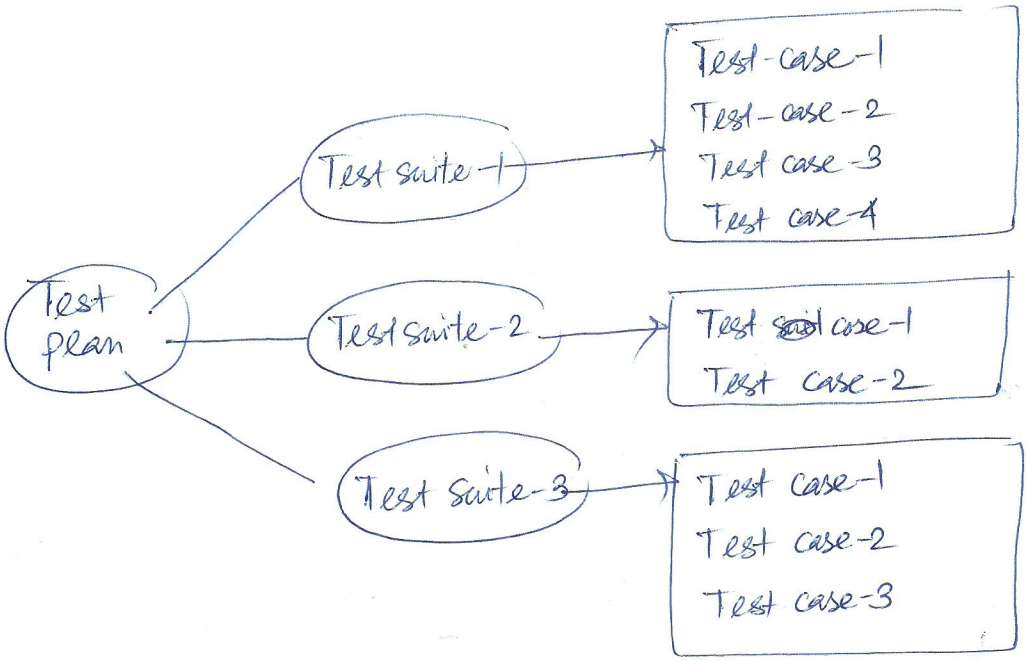
When Trace Table is not required

i	x
~~1~~ 2 ~~3~~ 4	~~11~~ ~~12~~ 13

screen

11 12 13

Test case, Test suite, Test plan



Test plan

Test suite-1				Test-suite-2		Test suite-3		
Test case-1	Test case-2	Test case-3	Test case-4	Test case-1	Test case-2	Test case-1	Test case-2	Test case-3

Equivalence partitioning & Boundary value analysis