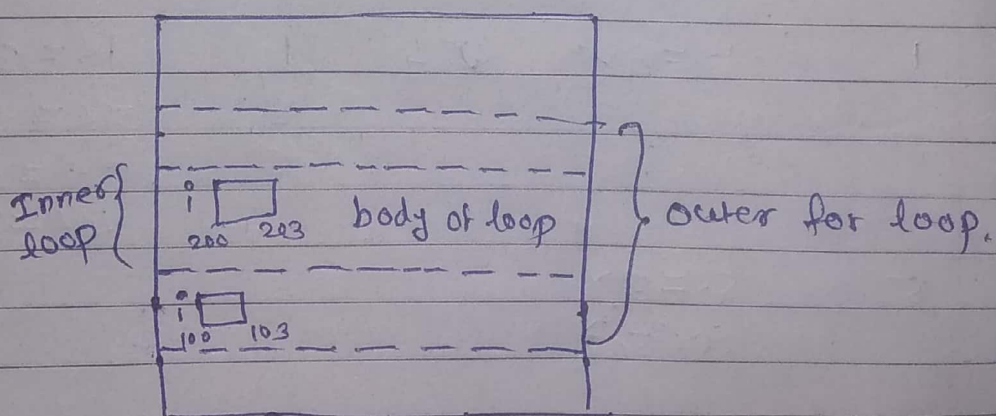


\* Program NO. 2 :

```
void main () {
    for (int i=1; i<=3; i++) {
        for (int i=1; i<=3; i++) {
            printf (" %d ", i);
        }
        printf ("\n");
    }
}
```

- Program Uses two variable of same name i.e. i for two for loop.
- First outer loop, the scope of 'i' is related with itself and inner loop.
- In inner loop, the scope of i is related only to this loop.



main () stack frame.

Output :   
 1 2 3   
 1 2 3   
 1 2 3

Dry run:-

Box	(outer loop.)	Box.	(inner loop)
i [1]	i i <= 3 i++	i [X]	i i <= 3 i++
i [2]	1 1 <= 3 ✓	i [2]	1 1 <= 3 ✓
		i [3]	2 2 <= 3 ✓
		i [4]	3 3 <= 3 ✓
			4 4 <= 3 ✗

(Here, it takes the value of i which is related to outer loop).

	2 2 <= 3 ✓	[2]	1 1 <= 3 ✓
i [3]		[3]	2 2 <= 3 ✓
		[4]	3 3 <= 3 ✓
			4 4 <= 3 ✗
	3 3 <= 3 ✓		1 1 <= 3 ✓
i [4]		[2]	2 2 <= 3 ✓
		[3]	3 3 <= 3 ✓
		[4]	4 4 <= 3 ✗

4 4 <= 3 ✗.

(loop breaks here).