# POPL PROJECT


- RISHIKESH
- VIKAS
- RAHUL.

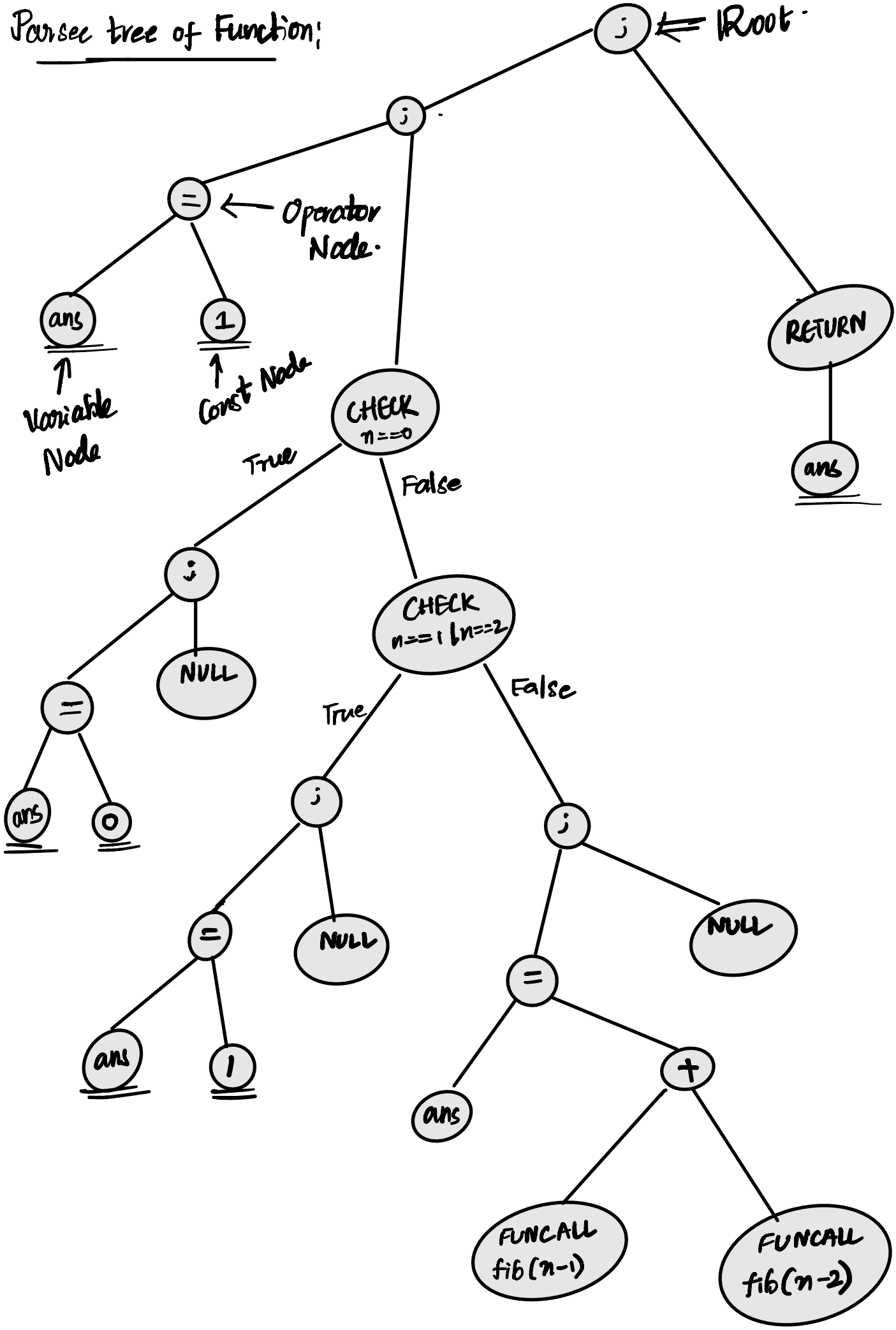
## Function:

```
fib @ int n {
    int ans = 1;
    check (n==0){
        ans = 0;
    otherwise check (n==1 | n==2){
        ans = 1;
    }otherwise{
        ans = fib(n-1) + fib(n-2);
    }
    return ans;
}
```

## Funtion table: funNode funTab[1000];

```
Typedef struct funNode{
        int nop;            ⇒ # of parameters.
        tabNode para[10];   ⇒ Parameters & its types.
        parseNode Start;    ⇒ Root Node of the function
                              is stored.
}
```

Parsec tree of Function:




- RISHIKESH.

Parsee tree for

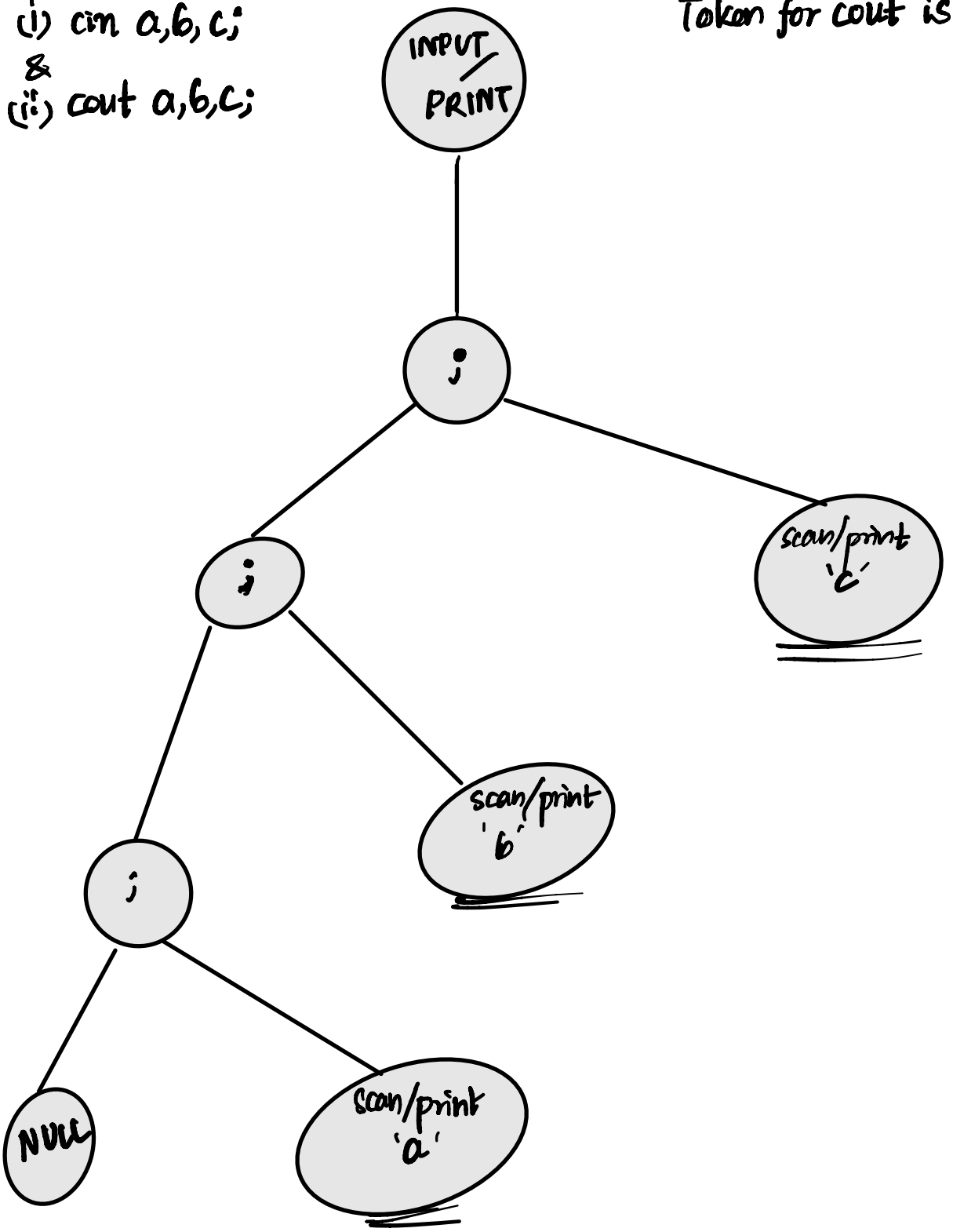
(i) cin a,b,c;

&

(ii) cout a,b,c;

Token for cin is INPUT

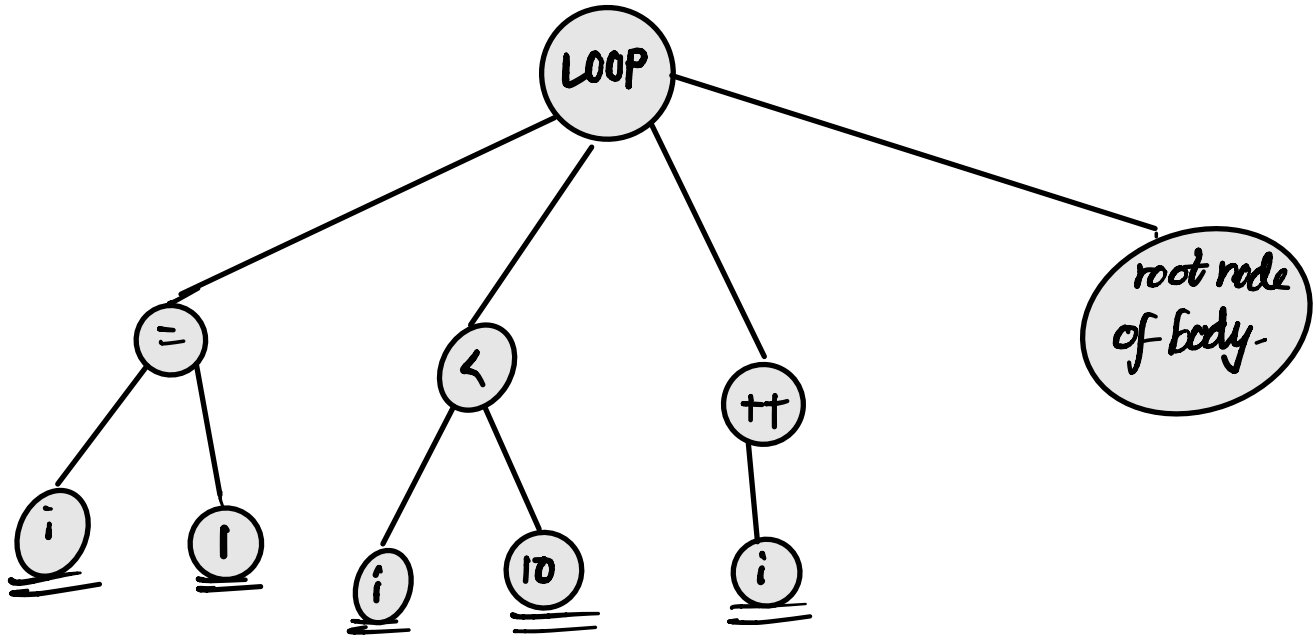
Token for cout is PRINT



# Parsee Tree for loops:

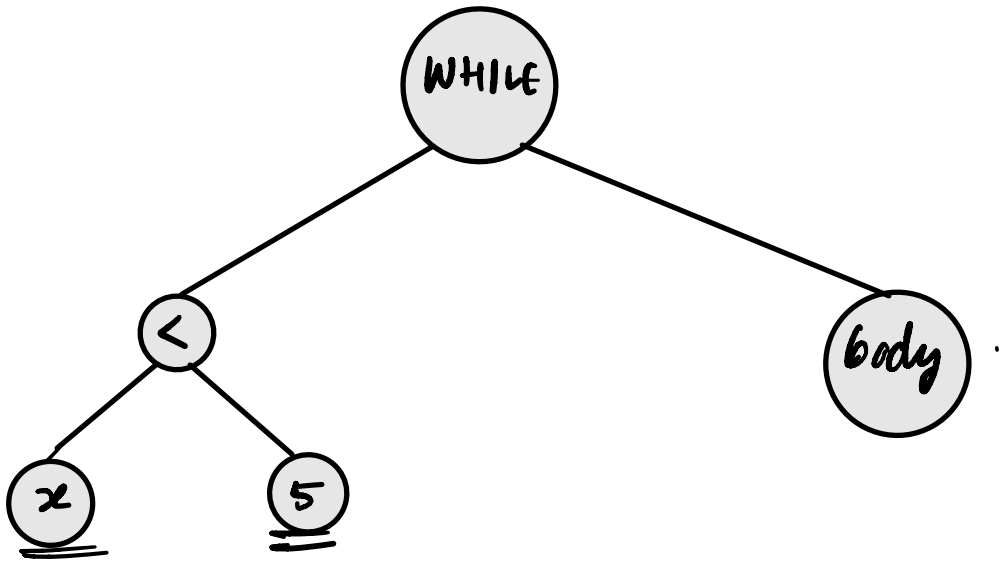
(i) Loop (for loop)

```
loop( i=1 ; i<10; i++){
      body
}
```




(ii) until ( while loop)

```
while( x<5){
      body
}
```



# Parse Tree for class

```
a {
    int k;
    double i;      } datalist

    b @ int d {
        double f = 100.8;
        write f;
        return f;
    };

    ba @ double gr {
        double e = 10.55858;
        write e;
        return e * gr;
    };
} $
```

Methodlist.

→ for 100 diff classes.

→ ObjNode tempClassStruct[100];

⇒ Used to store the parsetree / structure of a class temporarily so that it can be used when an object is initialized.

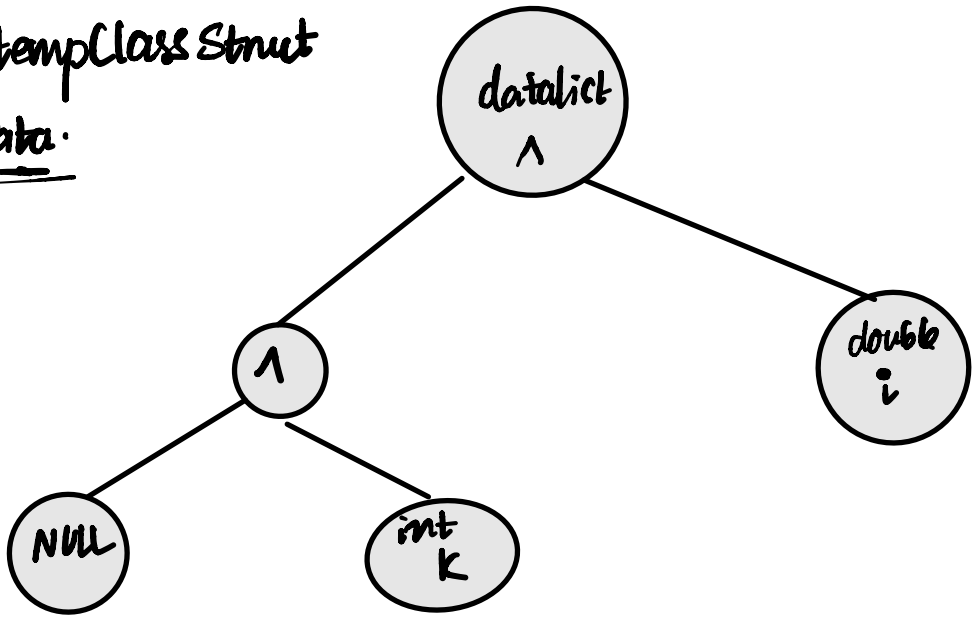
→ Typedef Struct ObjNode {

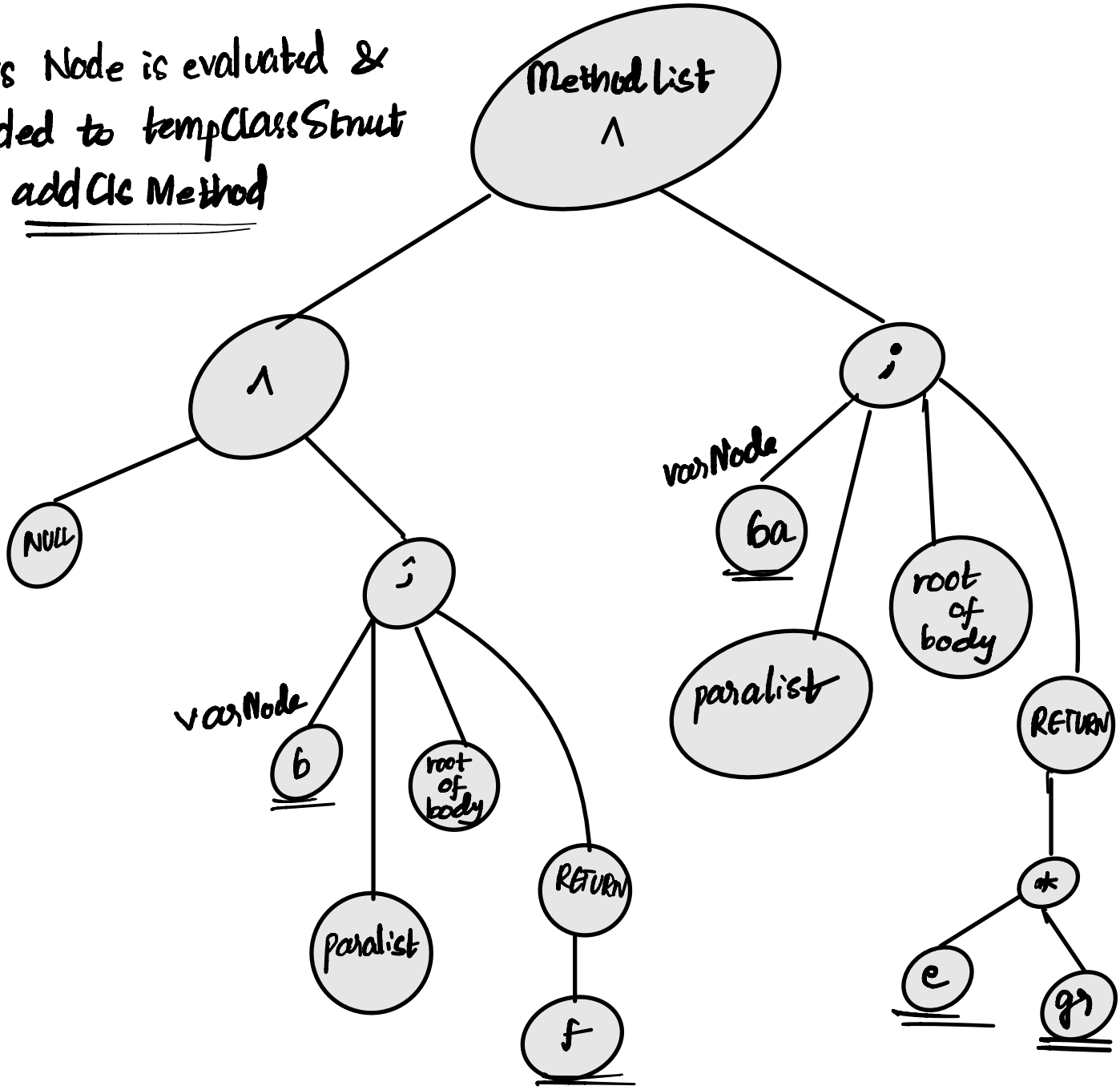
tabNode data[1000]; ⇒ Member Variables Nodes are stored

funcNode methTable[100]; ⇒ Roots of member methods are stored.

}

- This Node is evaluated & added to tempClassStruct by <u>addClsData</u>.




- This Node is evaluated & added to tempClassStruct by <u>addClsMethod</u>