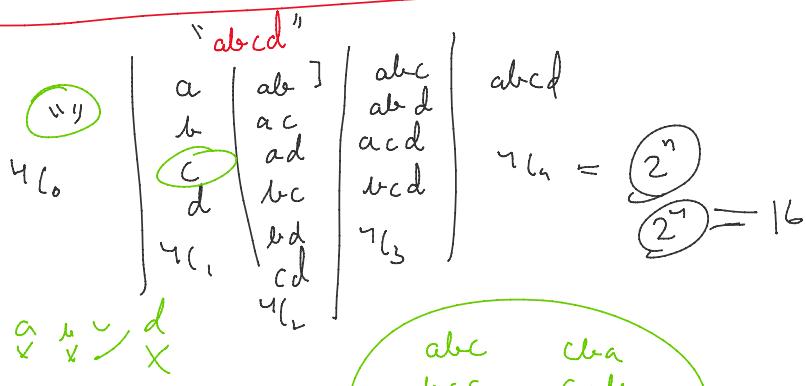
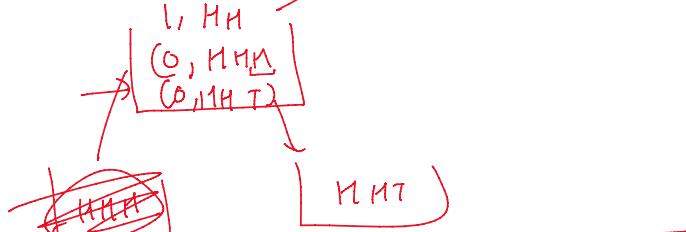
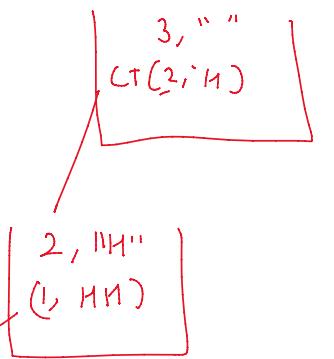


```

public static void CT(int n, String path) {
    if(n==0) {
        System.out.println(path);
        return;
    }
    BP : CT(n, "");
    SP : CT(n-1,);
    [ CT(n-1, path+"H");
    CT(n-1, path+"T");
}

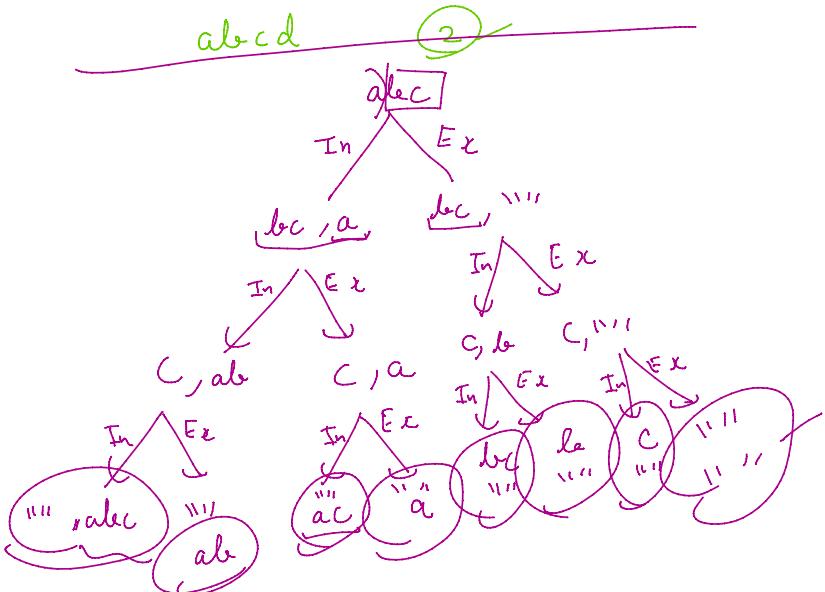
```



$\forall i \forall j \forall k \forall l \forall m \forall n$



$\forall c_i = 2^n = 2^4 = 16$



```

public static void SS(String str, String team) {
    if (str.isEmpty()) {
        System.out.println(team+"=>");
    }
}

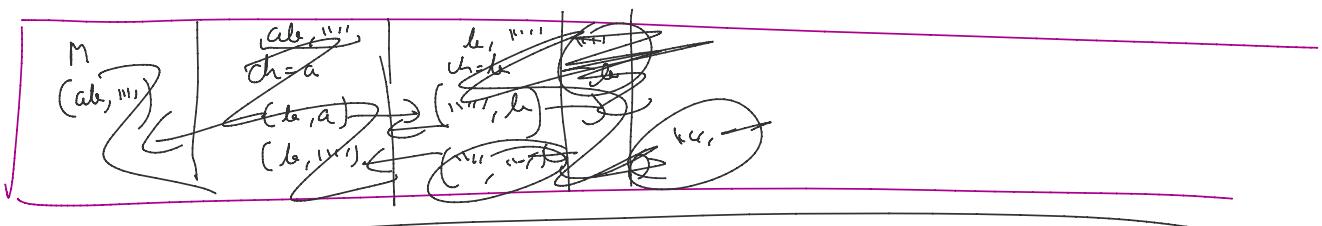
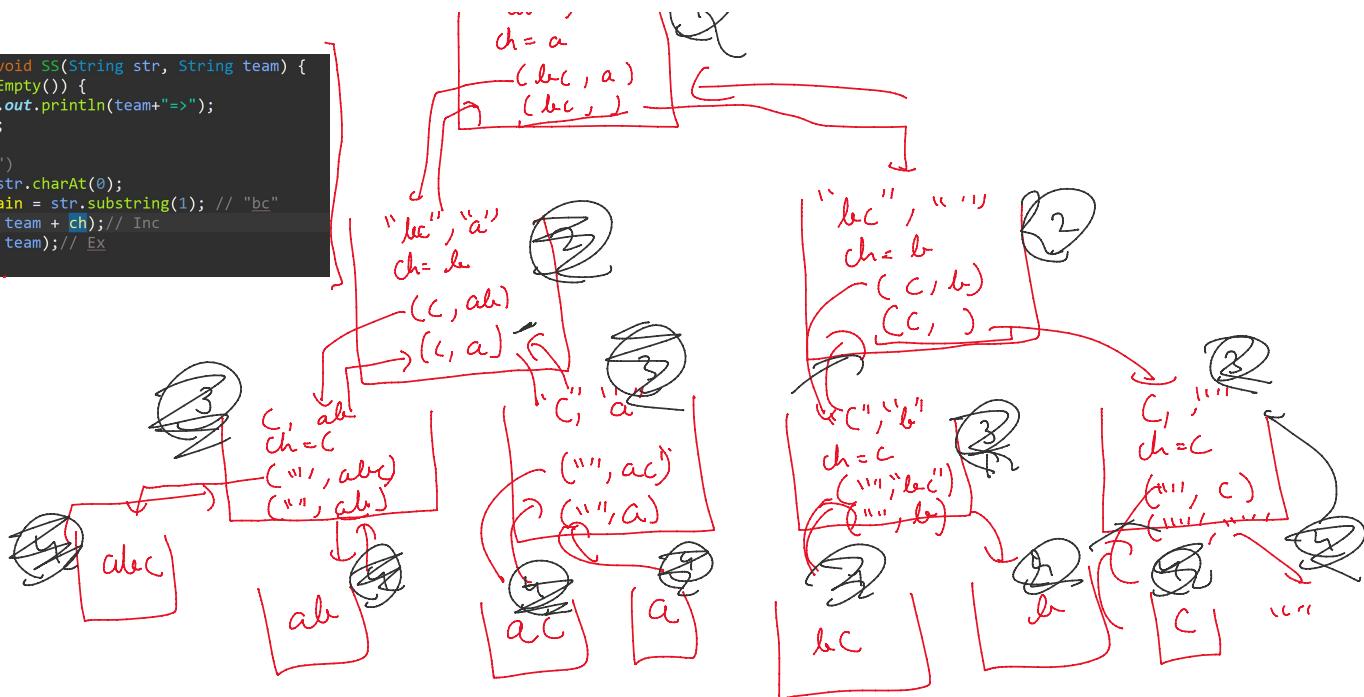
```



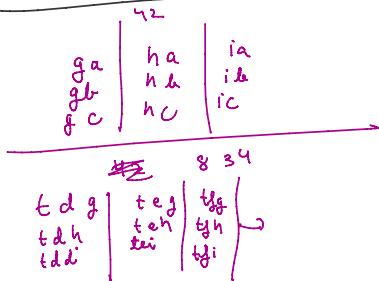
```

public static void SS(String str, String team) {
    if (str.isEmpty()) {
        System.out.println(team+"=>");
        return;
    }
    SS("abc","");
    char ch = str.charAt(0);
    String remain = str.substring(1); // "bc"
    SS(remain, team + ch); // Inc
    SS(remain, team); // Ex
}

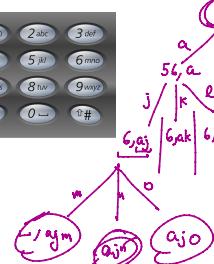
```



4 → ghi
3 → def
8 → tuv



4, 1, 5



```

public static void LetterKC(String digits, String ans)
{
    if(digits.isEmpty())
        System.out.println(ans);
    return ;
}
digits = "352";
char ch = digits.charAt(0); // '3'
String remain = digits.substring(1); // "52"
String options = Options(ch); // def
for(int idx = 0; idx < options.length(); idx++) {
    LetterKC(remain, ans + options.charAt(idx));
}

```

