Assignment : Recursion 1

Replace pi (Recursive)

```
Public class Solution {
    Public static string replace(string input){
      if(input.length()<2){
          return input;
      }
      if(input.substring(0,2).equals("pi")){
       return "3.14" + replace(input.substring(2, input.length()));
       }
      else{
       return input.substring(0,1) + replace(input.substring(1,input.length()));
       }
    }
}
```

OR

Public static string replace(string input)

```
{ string output = "";
  int size = input.length();
  for(int i=0; i<size; i++)
 { if(i+1<size && input.charAt(i)=='p' && input.charAt(i+1)=='i')
  { output += "3.14";
     i++;
  }
 else{ output += input.charAt(i);
     }
 } return output;
}
```

Remove X

xaxb

```
# Public class solution {
    static string str = "";
    Public static string removeX(string input){
      if(input.length()==0){
        return str;
      }
      if(input.charAt(0)!='x'){
        str = str + input.charAt(0);
      }
      return removeX(input.substring(1, input.length()));
    }
}
```

String to Integer ⟷ return Integer.parseInt(input);

```
# {
  Public static int convertStringToInt(string Input)
  { if(input.length()==1){
      return (input.charAt(0)-48);
    }
    double y = convertStringToInt(input.substring(1));
    double x = input.charAt(0)-48;
    x = x * Math.pow(10, input.length()-1) + y;
    return (int)(x);
  }
}
```

Math.pow(10,k)

"0001231" → 1231

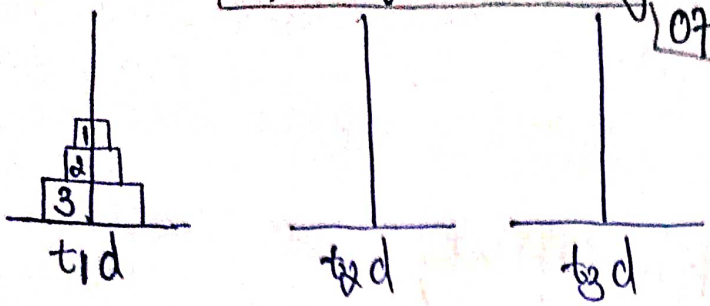
"123671" → 12367

```
{
    int sum = 0;
    for(int i=0; i<s.length(); i++)
    {
        sum = sum * 10;
        sum = sum + (int)s.charAt(i) - (int)'0';
    }
System.out.println(sum);
}
```

Tower of Hanoi

t1 se t2 ma dalna ha with help of t3.

Suspension of disbelief
↓
Believe in faith

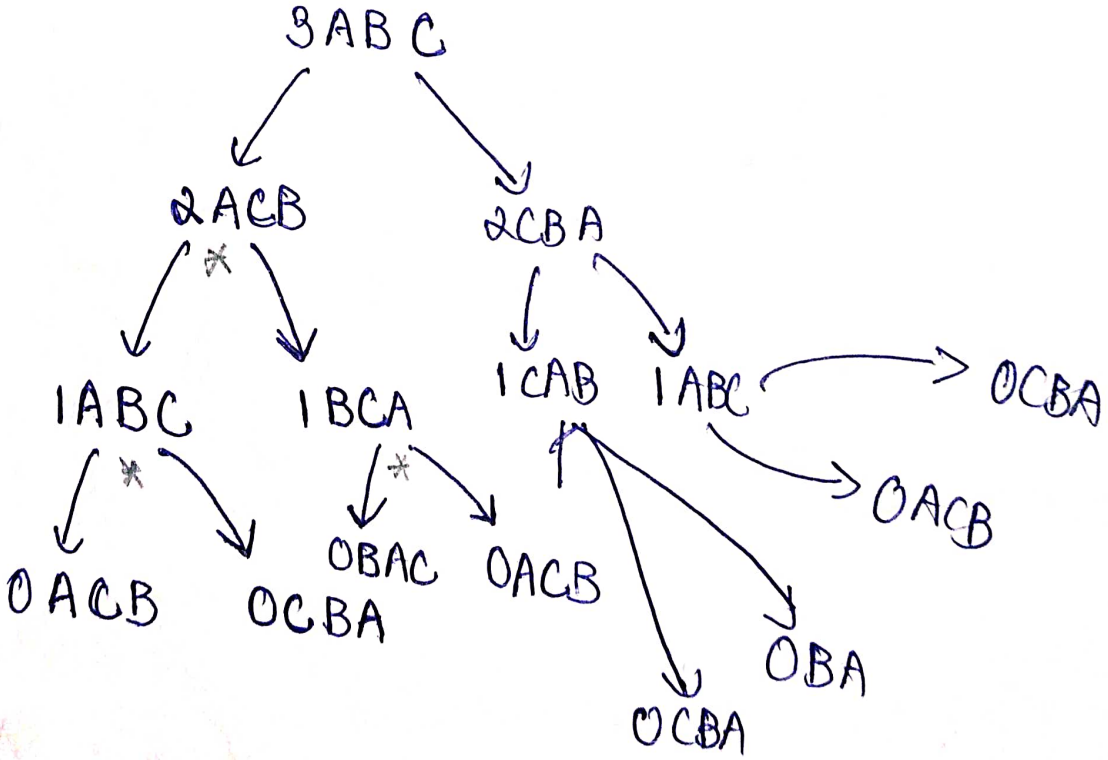


EULER TREE → JAHA ~~FAITH~~ MORE than 2 BRANCH

```
Public static void toh(int n, int t1d, int t2d, int t3d){
{
  if(n==0){
    return;
  }
  toh(n-1, t1d, t3d, t2d);
  System.out.println(n + "[" + t1d + "->" + t2d + "]");
  toh(n-1, t3d, t2d, t1d);
}
```

~~3[A->B]~~

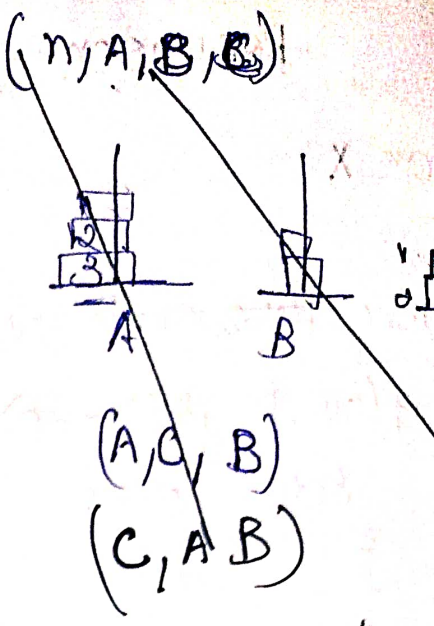
[A->B]



#

PAIR STAR —— X ——

hello
hel*lo



#

```
Public class solution {

  static string v = "";
  Public static string addStars(string s) {
    if(s.length() == 1){
      return v + s.charAt(0);
    }
    if(s.charAt(0) == s.charAt(1)){
      v = v + s.charAt(0) + '*';
    }
  else{
      v = v + s.charAt(0);
    } return addstars(s.substring(1));
}
```