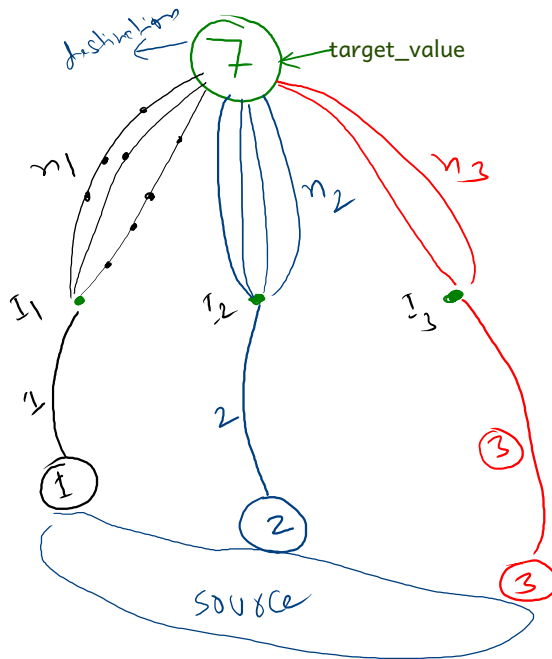


# Find Permutation of given numbers whose sum is equal to a target\_value

Example problem statement :

Find all the possible stair path with given total number of stairs step and allowed step size. e.g.

Total number of setps = 7 and at a time we can take step of size 1 or 2 or 3.



Total number of paths :  $n1 + n2 + n3$

n1: initial step = 1unit; distance of 'I1 to 7' = 6 unit

n2: initial step = 2unit; distance of 'I2 to 7' = 5 unit

n3 : initial step = 3unit; distance of 'I3 to 7' = 4 unit

```
private List<String> getStairPathPermutation1(int targetValue, int... allowedSteps) {  
    // targetValue becomes negative for invalid path  
    if (targetValue < 0) {  
        return List.of();  
    }  
    // targetValue becomes 0 for valid end of path  
    if (targetValue == 0) {  
        return List.of("");  
    }  
  
    List<String> paths = new ArrayList<>();  
    for (int i = 0; i < allowedSteps.length; i++) {  
        List<String> ipaths = getStairPathPermutation1(targetValue - allowedSteps[i], allowedSteps);  
  
        for (String path : ipaths) {  
            paths.add(allowedSteps[i] + path);  
        }  
    }  
    return paths;  
}
```