```
String ans = "";
Node curr = root;
int idx = 0;

while(idx < S.length()){
    if(S.charAt(idx) == '1') curr = curr.right;
    else curr = curr.left;

    if(curr.left == null && curr.right == null){
        ans=curr.data;
        curr = root;
    }
    idx++;
}
return ans;
```

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The End

total gas < total cost

| (gas =>) | 5 | 2 | 3 | 6 | 4 |
|---|---|---|---|---|---|
| (cost =>) | 6 | 3 | 3 | 6 | 1 |
| diff => | -1 | -1 | 0 | 0 | 3 |

ret ans: 2

| gas: | 2 | 5 | 6 | 4 | 8 | 9 |
|---|---|---|---|---|---|---|
| cost: | 7 | 1 | 9 | 7 | 5 | 4 |
| diff = | -5 | 4 | -3 | -3 | 3 | 5 |

start = -1
tank = 0

for(i=0; i < n; i++){

    int diff = gas[i] - cost[i];
    tank += diff;

    if(tank < 0){
        start = -1
        tank = 0
    } else {
        if(start == -1) start = i
    }
```