Leetcode May Challenge DAY: 28

1. Python

```python
class Solution:
    def countBits(self, num: int) -> List[int]:
        answer = [0]
        for i in range(1, num+1):
            answer.append(answer[i>>1] + int(i&1))
        return answer
```
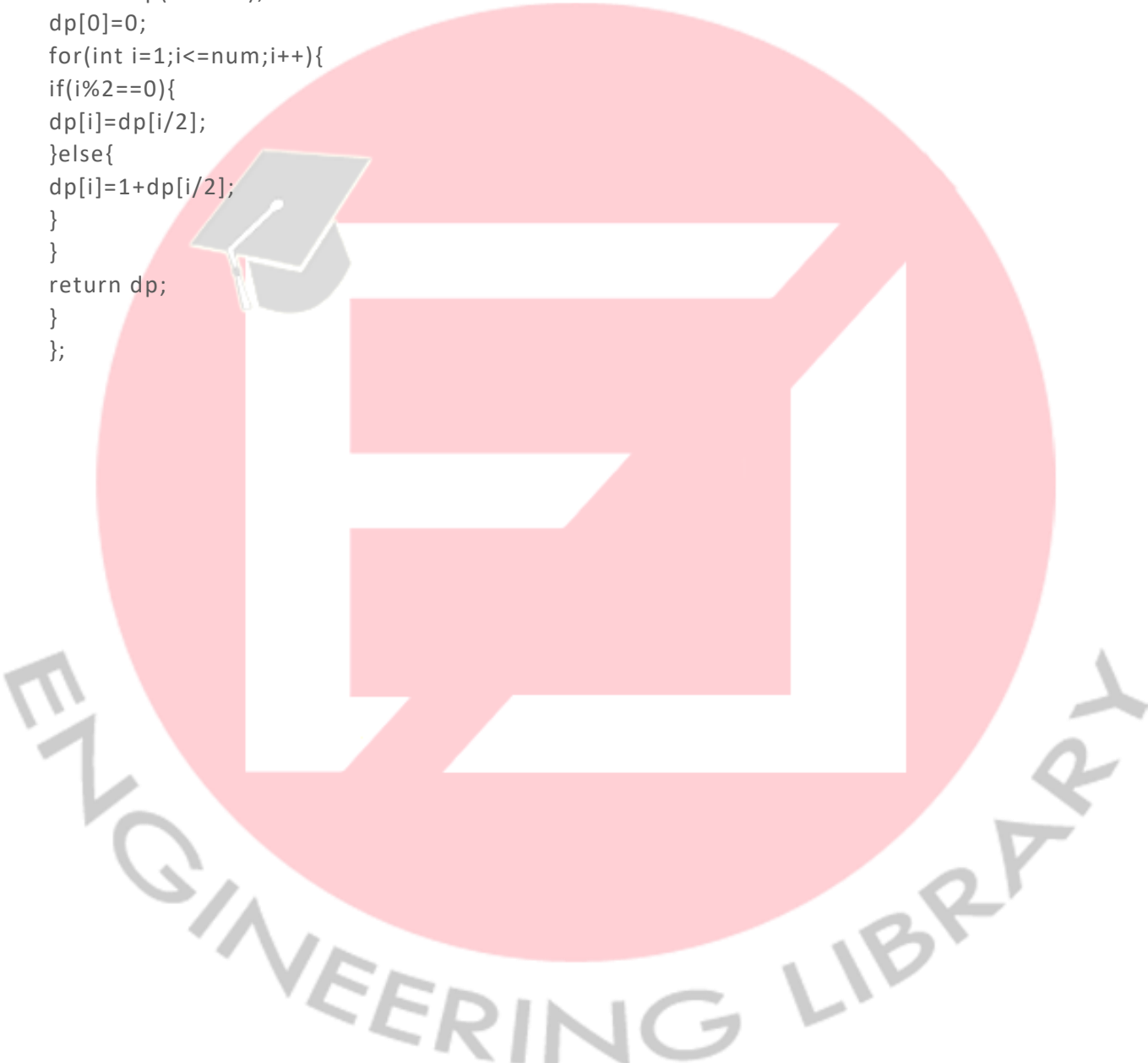
2. C++

```cpp
class Solution {

public:
vector countBits(int num) {
vector dp(num+1);
dp[0]=0;
for(int i=1;i<=num;i++){
if(i%2==0){
dp[i]=dp[i/2];
}else{
dp[i]=1+dp[i/2];
}
}
return dp;
}
};
```

3. JAVA

```java
public int[] countBits(int num) {

    int[] count = new int[num + 1];

    int diff = 1;

    for (int i = 1; i <= num; i++) {

        if (i / diff > 1) {

            diff *= 2;

        }

        count[i] = 1 + count[i - diff];

    }

    return count;

}
```