

```
int numDecodings(char* s) {
    int* dp;
    int str_len;
    int index;

    str_len = strlen(s);
    dp = (int*)malloc(sizeof(int)* (str_len+1));

    dp[0] = 1;

    for(index = 1 ; index < str_len+1; index++)
    {

        dp[index] = (s[index - 1] == '0') ? 0 : dp[index - 1];

        if ( (index > 1) &&
            ( (s[index - 2] == '1') ||
              (s[index - 2] == '2' && s[index - 1] <= '6')
            )
        )
        {
            dp[index] += dp[index - 2];
        }
    }

    return dp[str_len];
}
```