

Given: N days and the possible activities on that day

Aim: Find a way to have maximum enjoyment

Base case: On the first day, find the maximum enjoyment on that day. At day 0, the  $\text{opt}(0) = 0$ .

Sub problem: For all  $0 \leq i \leq N$ ,  $\text{opt}(i) = \text{opt}(i-1) + \max(\text{activity1}, \text{activity2}, \text{activity3})$

Result: After the N iterations the list in  $\text{opt}(N)$  is the way that have maximum enjoyment