Shinhoo Kim. 21900138

Algorithm Analysis Homework 3

Due by 4/14(Fri.) through LMS

Minimum coin exchange problem may not be solved by greedy depending on denominations of coin. But this problem can be solved by dynamic programming always. Provide recursive equation (solution) for the problem.

V: change
num[V]: minimum number of coins for change V.
coins[1..m]: denomanation of each coin from 1 to m.

$num[V] = \begin{cases} 0 & \text{if } V=0 \\ \min(num[V], num[V-coins[k]]+1) & \text{if } V\neq 0, \text{ for } k \text{ where } coins[k] \leq V \end{cases}$