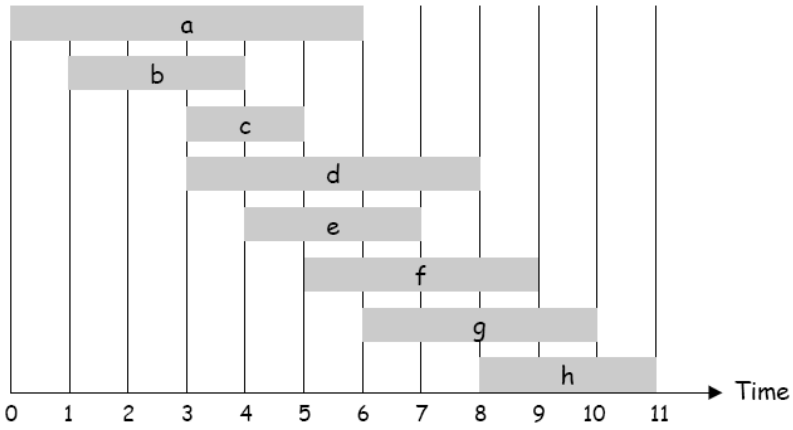
CS4335 Tutorial 7

Question 1. For the weighted interval scheduling problem, there are eight jobs shown in the figure. The weight for each job is as follows: v_a=3.5, v_b=2.0, v_c=3.0, v_d=3.0, v_e=6.5, v_f=2.5, v_g=12.0, and v_h=8.0.



Find a maximum weight subset of mutually compatible jobs. (Backtracking process is required.) (You have to compute p()'s. The process of computing p()'s is NOT required.) What is the running time of the algorithm?

Question 2. Compute the weighted binary search tree for e1=1, e2=5, e3=8, e4=9 with frequencies f(1)=5; f(2)=8; f(3)=6, f(4)=7 using the dynamic programming approach.

Use one more array to help for backtracking process so that we can find the optimal solution.
Give the pseudo code for the corresponding backtrack process.