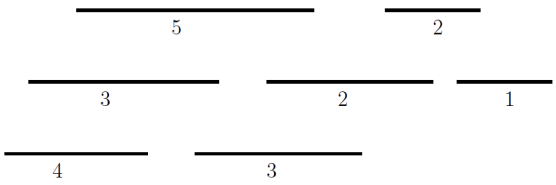
CS340 Analysis of Algorithms
Fall 2025

Lab:	**9**	**Professor:**	**Elizabeth Dinella**
Date:		**E-mail:**	`edinella@brynmawr.edu`
Title:	**Weighted Interval Scheduling**	**URL:**	**https://bmc-cs-340.github.io**

Consider the following input to the weighted interval scheduling problem:



1. What is the optimal solution for this input instance? Circle the intervals and state their total weight.
2. Label each interval according to the order in which they are processed in the WIS DP algorithm - just write a number next to each interval, starting from 1.
3. Compute the last compatible index for each interval and fill in the table (each interval is indexed as it is ordered above).

	1	2	3	4	5	6	7
`p`							

4. Run the WIS DP algorithm and fill in the tables. Use the aux table in the next page to help keep track of intermediate variable values for each iteration.

	0	1	2	3	4	5	6	7
`M`								
`pred`								

5. Trace back through the tables to reconstruct the intervals in the solution set that contribute to the max weight.

j	j − 1	M[j-1]	w[j]	p[j]	M[p[j]]	w[j]+M[p[j]]