

Name _____
 Date _____

Block _____

List-Processing and Decreasing-Time Algorithms

Apartments Unlimited is an apartment maintenance company that refurbishes apartments before new tenants move in. The following table shows the tasks performed when refurbishing a one-bedroom apartment, the processing time required for each task (measured in 15-minute units), and the precedence relations between tasks.

Tasks	Symbol/time	Precedence Relations
Bathrooms (clean)	B(8)	P → B
Carpets (shampoo)	C(4)	S → C, W → C
Filters (replace)	F(1)	
General cleaning	G(8)	B → G, F → G, K → G
Kitchen (clean)	K(12)	P → K
Fix Lighting	L(1)	
Paint	P(32)	L → P
Smoke detectors	S(1)	G → S
Windows (wash)	W(4)	G → W

- Draw a project digraph for refurbishing a one-bedroom apartment.
- Using the Priority List B, C, F, G, K, L, P, S, W, create a schedule for refurbishing an apartment with two workers. Show the project timeline and give its finishing time.
- Using the Priority List W, C, G, S, K, B, L, P, F, create a schedule for refurbishing an apartment with two workers. Show the project timeline and give its finishing time.
- Using the decreasing-time algorithm, schedule the project with 3 workers. Show the timeline for the project and give the finishing time.
- Using the decreasing-time algorithm, schedule the project with 4 workers. Show the timeline for the project and give the finishing time.