

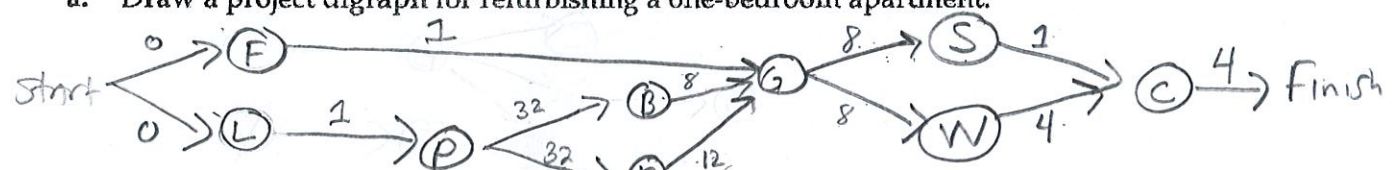
List-Processing and Decreasing-Time Algorithms

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.

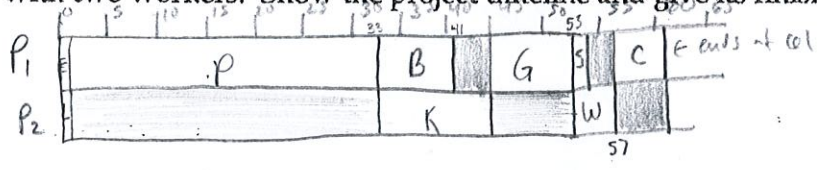
Tasks	Symbol/time	Precedence Relations
Bathrooms (clean)	B(8)	<del>P → B</del>
Carpets (shampoo)	<del>C(4)</del>	<del>S → C, W → C</del>
Filters (replace)	F(1) ✓	
General cleaning	G(8)	<del>B → G, F → G, K → G</del>
Kitchen (clean)	K(12) ✓	<del>P → K</del>
Fix Lighting	<del>L(1)</del> ✓	
Paint	P(32)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

✓  
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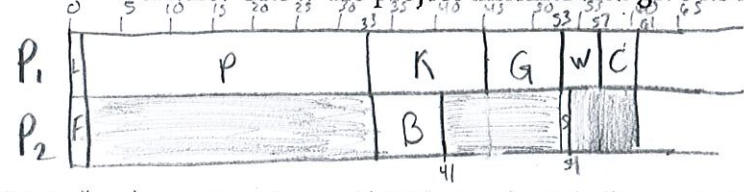
a. Draw a project digraph for refurbishing a one-bedroom apartment.



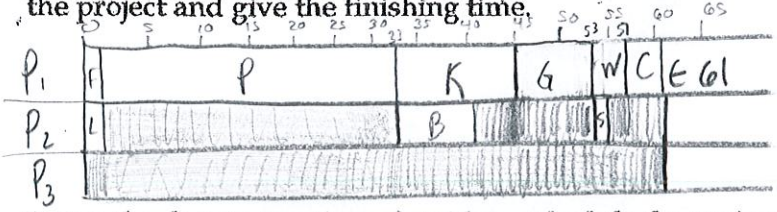
b. Using the Priority List ~~B, C, F, G, K, L, P, S, W~~, create a schedule for refurbishing an apartment with two workers. Show the project timeline and give its finishing time.



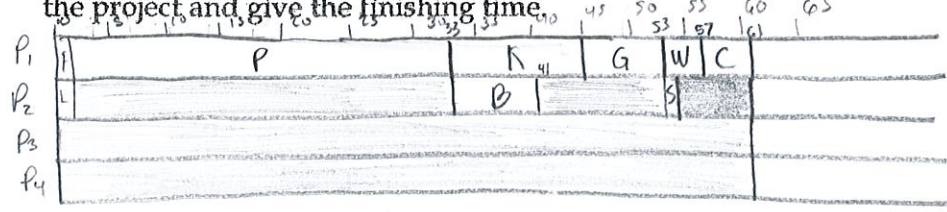
c. Using the Priority List ~~W, C, G, S, K, B, L, P, F~~, create a schedule for refurbishing an apartment with two workers. Show the project timeline and give its finishing time.



d. Using the decreasing-time algorithm, schedule the project with 3 workers. Show the timeline for the project and give the finishing time.



e. Using the decreasing-time algorithm, schedule the project with 4 workers. Show the timeline for the project and give the finishing time.



P, K, B, G, C, W, F, L, S