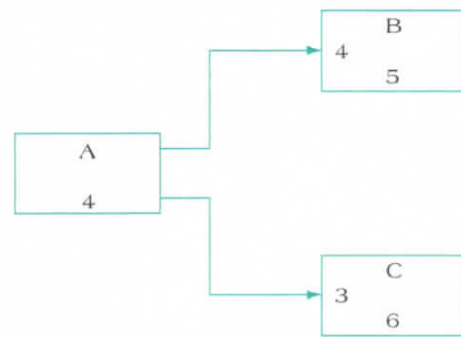


FIGURE 12.7 Sample Network Applying Resource Heuristics

Using these heuristics, let us consider a simple example and the method we would use to select the activities that get first “rights” to the resource pool. Suppose that a project has two activities (see Figure 12.7) scheduled that require the same resource at the same time. In deciding which activity should receive first priority for available resources, we can follow the heuristic logic used in the first decision rule and examine tasks B and C first in terms of their respective amount of slack time. In this case, activity C, with three days of slack, would be the best choice for prioritizing the resource. However, suppose that activities B and C both had three days of slack. Then, according to the heuristic model, we could move to the second decision rule and award the first priority to activity B. Why? Because activity B has a scheduled duration of five days as opposed to activity C’s duration of six days. In the unlikely event that we discovered that a tie remained between activities B and C following the first two heuristics, we could apply the third heuristic and simply assign the resource to the task with the lowest identification number (in this case, activity B). As we will see, the implication of how resources are prioritized is significant, as it has a “ripple effect” on subsequent resource leveling throughout the remainder of the activity network.

EXAMPLE 12.2 An In-Depth Look at Resource Leveling

A more in-depth resource-leveling example illustrates the challenge project teams face when applying resource leveling to a constructed activity network. Suppose we constructed a project network diagram based on the information in Table 12.2. Using the process suggested in Chapter 9 we can also derive the early start (ES), late start (LS), early finish (EF), late finish (LF), and subsequent activity slack for each task in the network. Table 12.3 presents a complete set of data.

TABLE 12.2 Activities, Durations, and Predecessors for Sample Project

Activity	Duration	Predecessors
A	5	—
B	4	A
C	5	A
D	6	A
E	6	B
F	6	C
G	4	D
H	7	E, F
I	5	G
J	3	G
K	5	H, I, J