AADL (Final Assignment) Bridge crossing puzzle

Assignment description

Four men have to cross a bridge at night. Any party who crosses, either one or two men, must carry the flashlight with them. The flashlight must be walked back and forth; it cannot be thrown, etc. Each man walks at a different speed. One takes 1 minute to cross, another 2 minutes, another 5, and the last 10 minutes. If two men cross together, they must walk at the slower man's pace. There are no tricks--the men all start on the same side, the flashlight cannot shine a long distance, no one can be carried, etc.

Write a program to find a solution for that problem **Input**:

number of men and the speed for everyone.

Output: Best time and the order of moving.

Notes:

- 1- **Team working**: two students together.
- 2- Estimated time is 14 days.