WHAT IS CLAIMED IS:

1. An automated guided vehicle (AGV) management method, comprising steps of:

(a) managing a plurality of AGVs to be recharged, by at least one wireless charging unit, in a parking area for ensuring that any of the plurality of AGVs leaving the parking area has a battery charge higher than a charge threshold;

(b) receiving tasks, wherein each of the tasks comprises information including at least one pick-up location, at least one drop-off location, a destination, and a due time,

(c) assigning the tasks to the plurality of AGVs tentatively;

(d) planning paths for the plurality of AGVs, respectively, according to the information of the tasks;

(e) regarding each of the plurality of AGVs, examining whether a battery charge of the AGV is sufficient to carry out a task, among the tasks, which comprises visiting the at least one pick-up location and the at least one drop-off location before arriving the destination, wherein if the battery charge of the AGV is sufficient to carry out the task which comprises visiting the at least one pick-up location and the at least one drop-off location before arriving the destination, steps (f) and (g) are performed, and if the battery charge of the AGV is not sufficient to carry out the task which comprises visiting the at least one pick-up location and the at least one drop-off location before arriving the destination, the AGV is recharged, and the step (c) is repeated;

(f) delaying assigning the task to the AGV if the AGV is expected to complete the task earlier than the due time of the task; and

(g) controlling the AGV to arrive at the destination at the due time,

wherein in the step (a), if a battery charge of a first AGV, among the

plurality of AGVs, which is currently recharged by the at least one wireless charging unit is more than 1) the charge threshold and 2) a sum of a preset charge value and a battery charge of a second AGV, among the plurality of AGVs, which is not currently recharged by the at least one wireless charging unit, assigning the second AGV to be recharged by the at least one wireless charging unit in replace of the first AGV.

2. The automated guided vehicle management method according to claim 1, wherein each of the plurality of AGVs has a dedicated wireless charging unit among the at least one charging unit in the parking area.

3. The automated guided vehicle management method according to claim 1, wherein in the step (a), an AGV, among the plurality of AGVs, which has a battery charge lower than a battery charge of any other one of the plurality of AGVs is assigned to the at least one wireless charging unit.

4. The automated guided vehicle management method according to claim 1, further comprising a step of assigning additional tasks to the AGV if the AGV is expected to complete the task earlier than the due time of the task.