The problem is in $\mathcal{NP}$ since we can exhibit an order in which to make the specials, and it can be verified that the total amount of money spent on ingredients, using this order, is at most x.

We now show that *Hamiltonian Path* $\leq_P$ *Daily Special Scheduling*. We are given a directed graph $G = (V, E)$ with n nodes and m edges. We define a special at the restaurant corresponding to each node, and an ingredient corresponding to each edge. Each special requires one unit of each of the ingredients corresponding to edges incidents to it (both incoming and outgoing). All ingredients come in bundles of two units, at a cost of one, and they go bad after two days.

We claim there is a Hamiltonian path in G if and only if there is a way to schedule all specials at a cost of $2m - n + 1$. If there is a Hamiltonian path, then we use this order for the specials; rather than having to buy every ingredient twice (for the two recipes that need it), we can save money on the $n - 1$ ingredients that correspond to edges on the path. This is a total cost of $2m - n + 1$. Conversely, if there is a schedule of cost $2m - n + 1$, then since every ingredient is used twice, there must be $n - 1$ that were only bought once. This means that for every consecutive pair of specials, there is a directed edge joining the corresponding nodes in the right order, and so there is a Hamiltonian path in G.

[1] ex723.151.229