Task 1(a)

Here, I tweeked the logic of selection sort but, like having two pointeres, one at the start and one at the end, if it reaches the target the True is returned

Task 1(b)

I used the binary search Algo. here, if by adding we get more or less than the target I shrinked the Arrery according to that.

Task 2(a)

Used built in sort.

Task 2(b)

Used merge sort Algo ~~to recursive way~~ to get but only the merging part to achieve $O(n)$.

Task 3

I used bubble sort on the [1] index of the task times to sort them according to there end time. I always picked the first sorted time then used the end time to compare with there's start time to see if that task can be scheduled.

Task 4

First I did the same thing as task 3. But there are two amount people. So I had to take a nested two dimensional list where every inner list would correspond to a assigned task, to one of the person. Then I implemented the three conditions, according to the question using to two nested loop.