

JavaScript test

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```
function assignTasksWithPriorityAndDependencies(developers, tasks) {  
  tasks.sort((a, b) => b.priority - a.priority || b.difficulty - a.difficulty);
```

```
  
  const developerAssignments = developers.map((dev) => ({  
    name: dev.name,  
    assignedTasks: [],  
    totalHours: 0,  
  }));
```

```
  
  const completedTasks = new Set();  
  const unassignedTasks = [];
```

```
  
  for (const task of tasks) {  
    const { difficulty, hoursRequired, taskType, dependencies } = task;
```

```
  
    const dependenciesMet = dependencies.every((dep) =>  
      completedTasks.has(dep)  
    );
```

```
    if (!dependenciesMet) {  
      unassignedTasks.push(task);  
      continue;  
    }  
  }
```

```
  
  const suitableDeveloper = developerAssignments.find((dev) => {  
    const developer = developers.find((d) => d.name === dev.name);
```

```
return (  
    dev.totalHours + hoursRequired <= developer.maxHours &&  
    developer.skillLevel >= difficulty &&  
    (developer.preferredTaskType === taskType ||  
        dev.assignedTasks.length === 0)  
    );  
});  
  
if (suitableDeveloper) {  
    suitableDeveloper.assignedTasks.push(task);  
    suitableDeveloper.totalHours += hoursRequired;  
    completedTasks.add(task.taskName);  
} else {  
    unassignedTasks.push(task);  
}  
}  
return { developerAssignments, unassignedTasks };  
}
```