# Distributed Systems Job Scheduler Using “Perfect” Fit Algorithm

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### Introduction

A distributed system is a computing system where multiple nodes are coordinated so as to appear as a single system to the end user. Where different servers have different capabilities in regard to CPU cores, memory and disk capacity, scheduling becomes a key problem. Scheduling algorithms can optimise for different variables, including server rental cost, turnaround time or resource utilisation.

Following the implementation of a job scheduler using an “all to largest” scheduling algorithm in stage 1, this project proposes and implements a new scheduling algorithm, named (perhaps presumptuously) perfect fit. Whilst this algorithm is not designed to make perfect scheduling decisions, it does aim to completely fill servers leaving no CPU cores idle on running servers.

### Problem Definition

### Algorithm Description