

# 毕业论文（设计）任务书



## 一、主要任务与目标

研究任务：

通过对该课题的研究，了解当前现有微服务划分方案以及依然存在的问题。

研究目标：

- (1) 通过对已有微服务划分方案的阅读与具体代码实现，提高自身文献阅读能力和代码编程能力。
- (2) 通过对已有微服务划分方案的分析，针对其中一个或多个问题进行算法研究，设计出更好的划分方案。

## 二、主要内容与基本要求

主要内容：

课题根据对现有的微服务划分文献进行细致分析，总结现有方案的特性及优缺点，以及形成优缺点的根本原因，挖掘更广阔的方案设计方向。

对比不同方案的关注点，扬长避短，针对不足之处提出自己设计的优化方案。

研究学习系统开发相关知识，为自己的微服务划分方案搭建完善的可简单方便使用的系统。

基本要求：

- (1) 对文献的搜索要全面，对文献的分析要深刻。
- (2) 算法的设计要完整，考虑算法的逻辑清晰合理。
- (3) 开发的系统要易用，考虑用户交互性明显直接。
- (4) 论文写作思路要清晰，论据充分逻辑恰当。

## 三、计划进度

起止时间	内 容	备 注
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2020.11	确定选题	
2020.11 - 2021.1	初步调研，阅读文献；进行开题答辩	
2021.1 - 2021.3	完成外文翻译、文献综述；完成开题报告	
2021.3 - 2021.4	完成项目架构设计，前后端开发；设计实验	
2021.4 - 2021.5	完成实验部分；完成毕业论文	

#### 四、主要参考文献

[1] J. Cito, P. Leitner, T. Fritz, and H. C. Gall, "The making of cloud applications: An empirical study on software development for the cloud," [J] the 2015 10th Joint Meeting on Foundations of Software Engineering (ESEC/FSE), 2015, pp. 393–403.

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[3] S. Newman, "Building microservices: designing fine-grained systems," [M] "O'Reilly Media, Inc.", 2015.

[4] Alessandra Levcovitz, Ricardo Terra, Marco Tulio Valente, "Towards a Technique for Extracting Microservices from Monolithic Enterprise Systems," [J] 3rd Brazilian Workshop on Software Visualization, Evolution and Maintenance (VEM), 2015, pp. 97-104.

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- [10] F. -D. Eyitemi and S. Reiff-Marganiec, "System Decomposition to Optimize Functionality Distribution in Microservices with Rule Based Approach," [J] 2020 IEEE International Conference on Service Oriented Systems Engineering (SOSE), 2020, pp. 65-71.
- [11] W. Jin, T. Liu, Q. Zheng, D. Cui and Y. Cai, "Functionality-Oriented Microservice Extraction Based on Execution Trace Clustering," [J] 2018 IEEE International Conference on Web Services (ICWS), 2018, pp. 211-218.