**MASTER** **THESIS** **PROPOSAL**

**by**

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**ABSTRACT**

This is abstract



|  |
| --- |
| GPU Processing |

Notation:



MapCount



Map

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |
|  |  | PreﬁxSum |  |  |
|  |  |  |  |  |
|  |



Reduce

Count



Reduce

...

...



Reduce

Count



Reduce

|  |
| --- |
| Reduce Stage |

**CHAPTER** **1**

**SOURCE** **OF** **RESEARCH** **TOPIC,** **RESEARCH** **PURPOSE** **AND** **SIGNIFICANCE**

**1.1** **The** **source** **of** **the** **topic**

An example of figure

|  |
| --- |
| Mars Scheduler |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Map Stage   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | | Preprocess | Map  Split |  |  | PreﬁxSum |  |  | |  | |  |  |  |  |  |  |  | |



Map



...

...



MapCount

|  |
| --- |
| Group |
| Group Stage |

Figure 1. 1: The workflow of Mars on the GPU.

*1.* *Results* *on* *MarsBrook*

Table 1. 1: Comparison on code sizes of MM and SS using MarsBrook and Brook+.

|  |  |  |
| --- | --- | --- |
| **Applications** | **MarsBrook** | **Brook+** |
| MM | 66 | 93 |
| SS | 66 | 611 |

**1.2** **Research** **background** **and** **significance**

**Organization:** The remainder of the thesis is organized as follows. We give a brief overview of GPUs, and review prior work on GPGPU and MapReduce in Chapter **??**. We present the design and implementation details of Mars in Chapter **??** and Chapter **??** respectively. We present the extension to multiple machines in Chapter **??**. In Chapter **??**, we present our experimental results. Finally, we conclude in Chapter 8.

**CHAPTER** **2**

**LITERATURE** **REVIEW** **AND** **ANALYSIS** **2.1** **Research** **review**

An examples

MapReduce is a successful paradigm [1], originally proposed by Google, for the ease of dis- tributed data processing on a large number of machines. In such a system, users specify two func- tions: (1) a *map* function to process an input key/value pair, and to generate a set of intermediate key/value pairs;

**2.2** **Analysis** **of** **the** **literature** **review**

**CHAPTER** **3**

**MAIN** **CONTENT** **OF** **RESEARCH**

xxx

**CHAPTER** **4**

**ACCOMPLISHED** **WORK**

**CHAPTER** **5**

**RESEARCH** **PLAN,** **EXPECTED** **OBJECTIVES** **AND** **RESULTS**

**5.1** **Research** **Plan**

**5.2** **Expected** **objectives** **and** **research** **achievements**

**5.3** **Time** **scheme**

**CHAPTER** **6**

**REQUIRED** **CONDITIONS** **AND** **RESOURCES**

x

**CHAPTER** **7**

**ANTICIPATED** **PROBLEMS** **AND** **SOLUTIONS**

**CHAPTER** **8**

**CONCLUSION**

This is conclusion if need

**REFERENCES**

[1] J. Dean and S. Ghemawat, “Mapreduce: Simplified data processing on large clusters,” *OSDI*, 2004. [Online]. Available: http://www.usenix.org/events/osdi04/tech/dean.html