PROJECT REPORT

CPU & GPU PERFORMANCE ANALYSIS ON 2D MATRIX ADDITION, MULTIPLICATION AND REVERSAL

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14.K1.0051

Faculty of Computer Science
Soegijapranata Catholic University
2018

APPROVAL AND RATIFICATION PAGE

CPU & GPU PERFORMANCE ANALYSIS ON 2D MATRIX ADDITION,
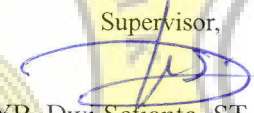
MULTIPLICATION AND REVERSAL

by

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This project report has been approved and ratified

by the Faculty of Computer Science on January, 22, 2018

With approval,

Supervisor,

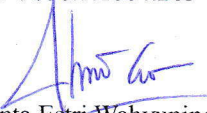YB. Dwi Setianto, ST., M.Cs
NPP : 058.7.2017.021

Examiners,

1.)

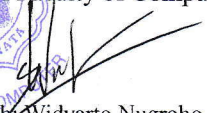Suyanto EA, Ir., M.Sc
NPP : 058.1.1992.116

2.)

Rosita Herawati, ST., MIT
NPP : 058.1.2004.263

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STATEMENT OF ORIGINALITY

I, the undersigned:

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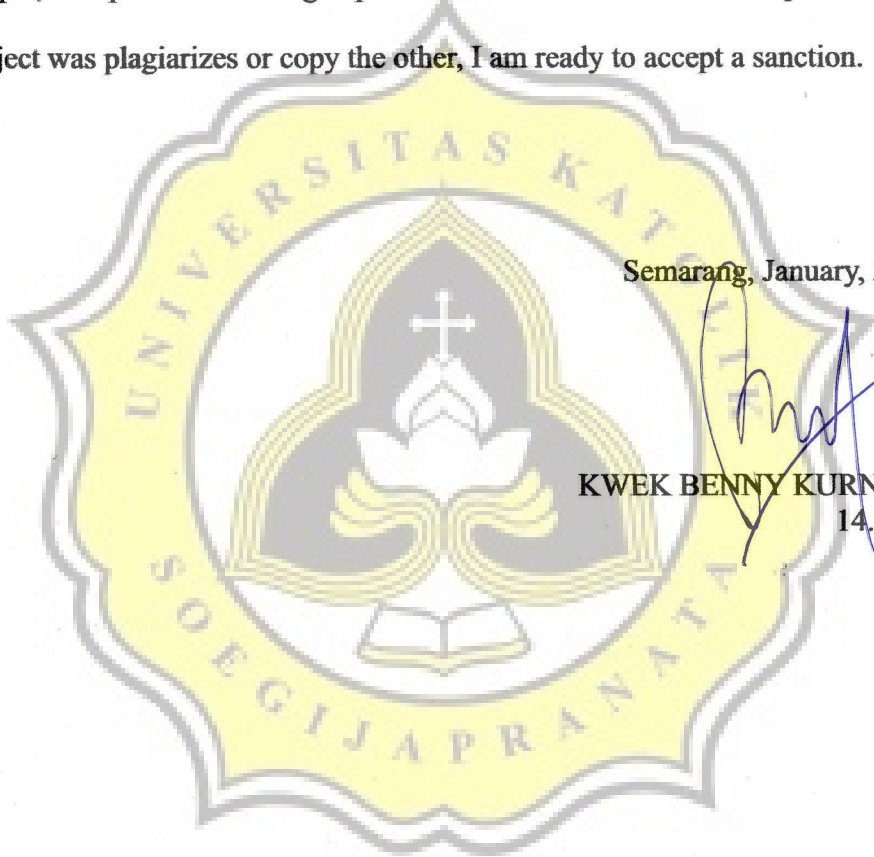
Semarang, January, 22, 2018

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ABSTRACT

The GPU or Graphic Processing Unit can be used on many platforms in general GPUs are used for rendering graphics but now GPUs are general purpose parallel processors with support for easily accessible programming interfaces and industry standard languages such as c, phyton and fortran. In this study the authors will find out the comparison of CPU and GPU in computing in some task for completed the matrix calculation.

To find out the comparison between CPU and GPU the author will do some test, test given to the GPU and CPU to observe the use of PU, memory and computing speed solve matrix calculations and increase the number of matrix dimensions.
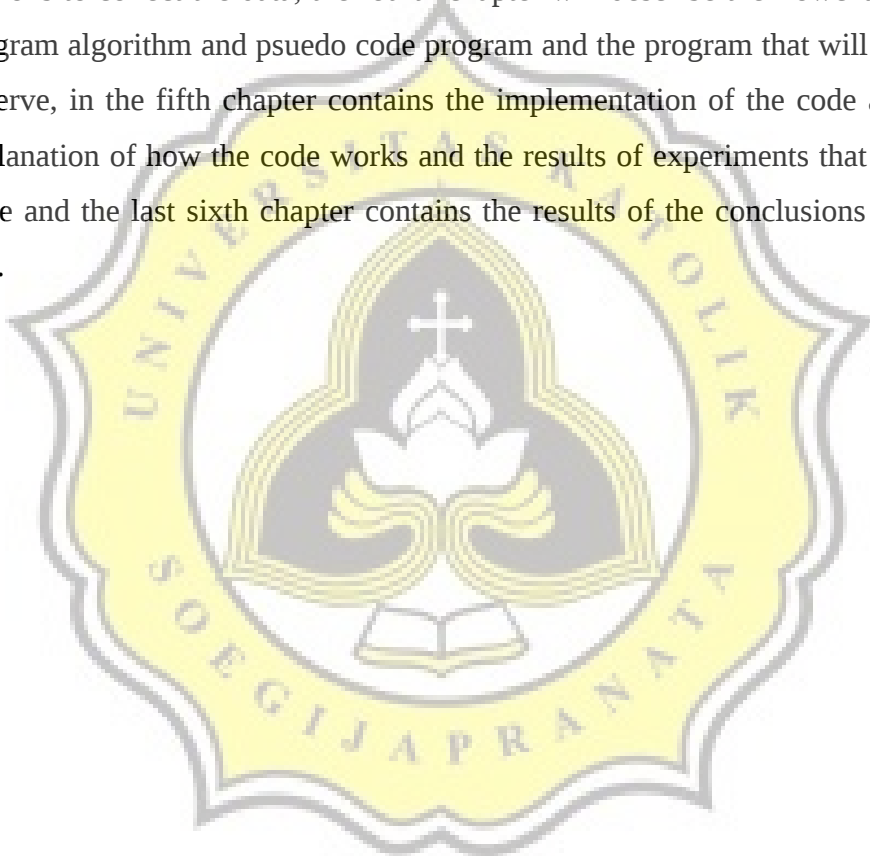
the results of the tests done in this paper show that asynchronous GPU is faster than sequential and thread usage for GPU needs to be adjusted for GPU load efficiency.
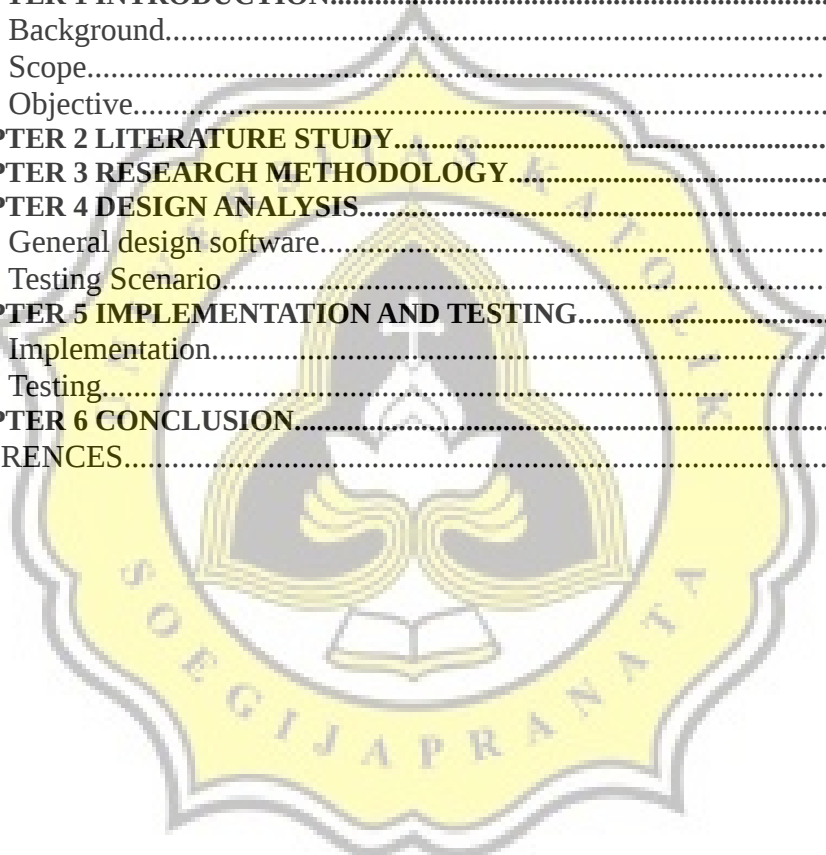
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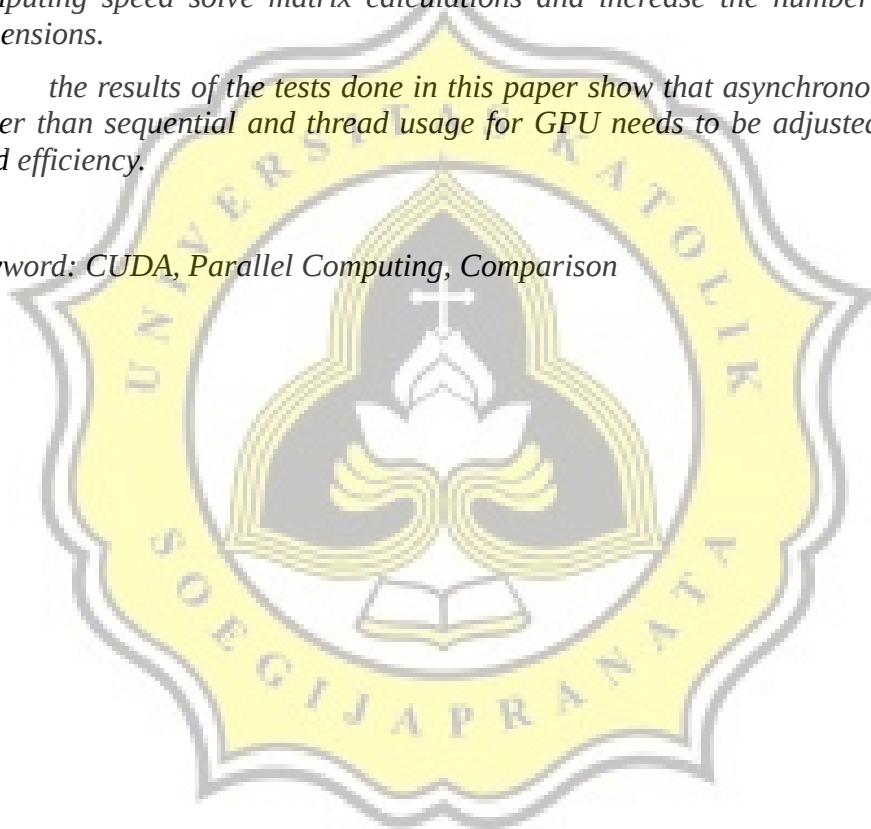
PREFACE

This research compares the effect of matrix dimensions on CPU and GPU consisting of six chapters. The first chapter is about backgrounds that compare CPU and GPU in general, the second chapter contains research references like journals and documentation, the third chapter will explain the Methodology in general such as the platform used, the experiments to be tested and the observed sections to collect the data, the fourth chapter will describe the flowchart and test program algorithm and psuedo code program and the program that will be used to observe, in the fifth chapter contains the implementation of the code along with explanation of how the code works and the results of experiments that have been done and the last sixth chapter contains the results of the conclusions of resarch this.

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