Vienna University of Technology

192.137 Heuristic Optimization Techniques

TU Wien Algorithmics and Complexity Group

Programming Project 1

Authors:

Tobias Sloviak
01204691

Camilo Tello Fachin
12127084

Supervisors:

Prof. Dr. Günther Raidl

Dipl. Ing. Enrico Iurlano

Dipl. Ing. Laurenz Tomandl

November 15, 2023

TECHNISCHE
UNIVERSITÄT
WIEN
Vienna University of Technology

Contents

To Do's

- either make framework work or create new framework
- analyze locks in lecture slides and in paper:
  - Test-and-Set Lock
  - Test-and-Test-and-Set Lock
  - Ticket Lock
  - Array Lock
  - CLH Lock
  - MCS Lock
  - Hemlock (from paper..)
- in the lectureslides from the project it says:
  - Benchmark the following two under various scenarious, meaning low/high contention
  - Benchmark Throughput (probably locks-unlocks performed per time)
  - Benchmark Latency
  - Benchmark for fairness, we have to think of some number to measure fairness, maybe locks/unlocks achieved per thread

1 Introduction

2 Generic Chapter Title 2

Here we will see the text from Iris and of the Manul. This should compile on its own now.

3 Generic Chapter Title 3