Individual Contribution on his Project

Chenxin Ma, Xi He

December 18, 2014

We have a happy teamwork on this project. Because of the weak background we had on integer programming and programming on Python before this semester, each task we did in this project was from tremendous reading and thinking, each function we implemented was from many times revising and debugging. We met many difficulties, but luckily, we solved a majority of them. Every discussion was effective and encourages us to go further. Both of us tried our best on this final project.

Contribution from Chenxin Ma

In terms of implementation, I was responsible for implementing the first step in pre-processing, primal phase II procedure, dual phase II procedure, branch and bound algorithm. Typically, I wrote the following files: pre-processing.py, prime_phase_II.py, dual_Phase_II.py, Branching.py and a part in main.py.

In terms of numerical experiment, I was responsible for those experiments on binary knapsack instances. Those instances are from the the author of the paper we studied,Prof. Goycoolea.

In terms of writing report, I was responsible for describe algorithms I implemented and the experiments I made.

The above things are mainly my contribution. However, a lot of them were finished after discussions and cooperation with Xi. I could not finish these tasks without teamwork.

Contribution from Xi He

In this project, I implemented the pre-processing procedure pro.py which simplify the original problem, prime_phase_I.py, and domination.py.

Besides, I make contribution in testing the algorithm and debug our implementation. In the numerical experiment part, I created the program that compared our implementation and the pulp with various of instants in a convenient way. I also generate random instants and recorded numerical results.

In the report, I finished the description of those algorithms that Iimplemented, and analysis of numerical results.

My mainly contribution is stated above. Throughout all this project, I discussed with Chenxin about the correct understanding of the paper and algorithm, and in order to implement our program correctly, efficiently and robustly, we debug and test each other's implementation. It's a cherish experience to work with Chenxin as a team and finished our project.

We use git to track and finish the whole project step by step, you may find the time-line about each work we did in this git repository.

https://bitbucket.org/Xi_He/ip_proj/commits/all

Also, I made a screenshot of our work for this project in the following two pages.

Author	Commit	Message
Xi He	c2fcfa6	arrangement
Xi He	4597548 M	merger
Xi He	f962800	update report and instruction
Chenxin Ma	d2ec824	teamwork
Chenxin Ma	8596b87	repeat
Chenxin Ma	5207986 M	repeat
Chenxin Ma	459f09b	repeat
Xi He	eeab3e3	merge
Chenxin Ma	a74a47f	report and instruction updated
Xi He	cd994bc	add instance and update
Chenxin Ma	0a52e76 M	Merge branch 'master' of https://bitbucket.org/Xi_He/ip_proj
Chenxin Ma	a95b17e	figures
Xi He	eb81a2c M	merge
Xi He	1ea627c	update numerical experiment
Chenxin Ma	0131f0d	reprot updated
Chenxin Ma	d974808 M	e branch 'master' of https://bitbucket.org/Xi_He/ip_proj
Chenxin Ma	73f3344	new vision
Xi He	583779f	update report and numerical experiment
Xi He	c1cc393 M	merge
Xi He	1bbdf76	merge
Chenxin Ma	1f93837	My commit message
Chenxin Ma	a4666a0	new
Chenxin Ma	e5cf3e3	run numerical.sh in confidential
Xi He	ea177f8	delete useless
Xi He	797130d	update and numerical
Xi He	808f618 M	merge
Chenxin Ma	1f24e41	some
Chenxin Ma	f601e75	adss
Xi He	69b3466 M	merge
Xi He	a392325	merge

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Commits

All branches

Author	Commit	Message
Chenxin Ma	9a9170a	a3 a4 in report
Xi He	47b9f71 M	merge
Xi He	239412c	bug
Chenxin Ma	1939d94	update
Xi He	f486acc M	merge
Xi He	a8efb94	Aggregate_variables
Chenxin Ma	2e29b25	instance&sol
Xi He	9cf620d	Add function Simplify MIKP and update report
Xi He	5d68ec7	uncompleted a6 and a template for report
Xi He	89fa5d5	merge
Xi He	6a33f67 M	merge
Chenxin Ma	96f9312	a3 a4 a5
Xi He	d59cd1d M	merge
Xi He	e859cb5	modify alg2
Chenxin Ma	6a0afe8	revise
Xi He	d50af0c	alg2 and examp
Chenxin Ma	ca3aee8	confidential
Chenxin Ma	d406ebb	algorithm 1
Xi He	fcac34c	Details in introduction
Xi He	dd9c155 M	Merge branch 'master' of bitbucket.org:Xi_He/ip_proj
Xi He	c142f7d	merge
Chenxin Ma	6a39e91	proposal
Chenxin Ma	66a8906	no message
Chenxin Ma	a083a6c	no message
Xi He	5d5bce9	add Intro and research plan
Xi He	b345677	template file

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