

硕士中期报告-软件测试

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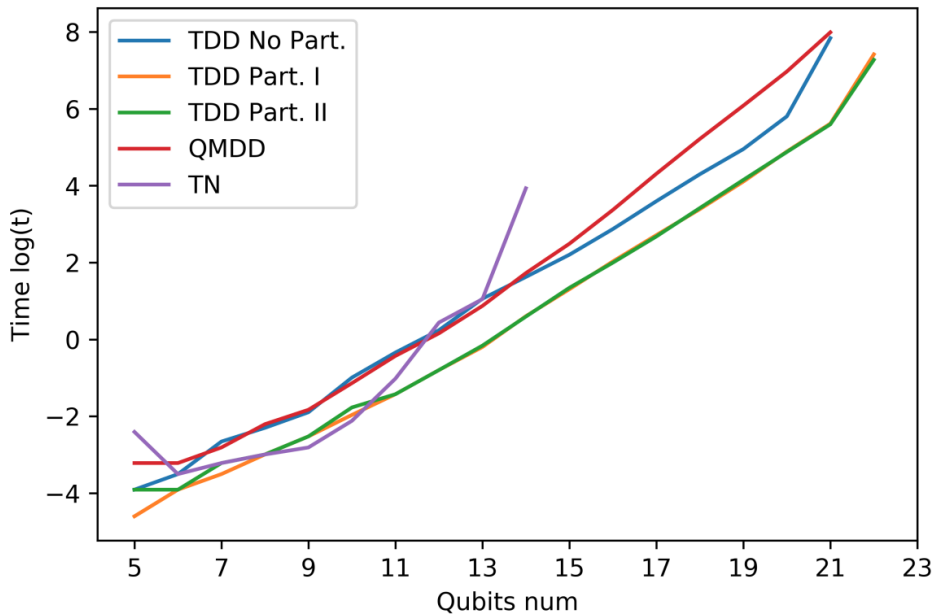
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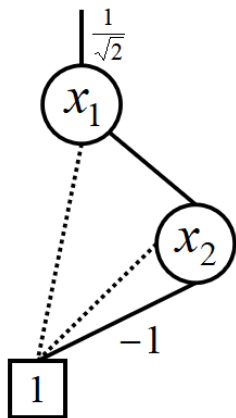
transition system: (S, I, Σ, T)

$$\text{where } \begin{cases} x = x_1, \dots, x_n \\ y = y_1, \dots, y_n \\ \sigma = \sigma_1, \dots, \sigma_m \end{cases}$$

Quantum transition system: (S, S_0, Σ, R)



基本功能



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$$\begin{array}{cc} x_2 = 0 & x_2 = 1 \\ \begin{array}{c} x_1 = 0 \\ x_1 = 1 \end{array} & \begin{bmatrix} 1 & 1 \\ \frac{1}{\sqrt{2}} & \frac{1}{\sqrt{2}} \\ \frac{1}{\sqrt{2}} & -\frac{1}{\sqrt{2}} \end{bmatrix} \end{array}$$

输入处理模块

内存管理模块

TDD 基础模块

TDD 算法模块

benchmark	basic	addition	contraction
Grover 20	~5min	~4min	~4sec
Quantum Fourier Transform 20	~20min	~11min	<1sec
Quantum Random walk 20	~6min	~4min	~15sec
Bernstein-Vazirani 50	~4min	~4min	~16sec
GHZ 500	~3sec	~1.5sec	~1.7sec

测试样例

