

Center aligned texts Method - 1.

So in this example we have considered Total System is represented by the tensor product of the particles and we can clearly see that the final state can be factored into tensor product of each individual particle.

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Center aligned texts Method - 2.

All quantum gate operations are linear and reversible. This is because the very nature of quantum mechanics is reversibility and linearity. Since quantum mechanical operations are linear so quantum gates which perform these operations are represented by matrices.

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Left justified texts.

A system of several qubits can now be associated with a system of several QSL bits containing two internal bits each. A QSL simulation of the quantum Controlled-NOT (CNOT) gate can be constructed from two classical reversible logic CNOTs.

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Right justified texts.

We need to point out that our task is not to create exact Toffoli gate equivalents, or even simulate the full quantum-mechanical system as such. It suffices to give a working efficient QSL version of the Deutsch-Jozsa algorithm.

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End to End justified text.

If the quantum oracle is a constant function the probability of the initial states changing is 0. Hence the first 3 qubits have retained their initial states of 0. In case of a balanced function the probability of the initial states changing is 1 hence the resultant states of the first 3 qubits have changed from 0 to 1.

Accordingly, measurement of the phase bit will be followed by a randomization of the computational bit. These constructions of state preparation and measurement prohibit exact preparation and readout of the system. Devised QSL equivalents of the Deutsch-Jozsa and Simon's quantum algorithms. In the quantum algorithm, you are given a black-box quantum oracle, a unitary gate that implements f by acting on qubits, your task is to distinguish two or more families of functions.

In the presented QSL algorithms, you are given a black-box QSL gate that implements f by acting on QSL systems, and the same task. Using the QSL framework, we obtain the same success probability and the same time and space complexity as for the quantum algorithms, and these QSL algorithms are in turn efficiently simulatable in classical Turing machines.

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Vertical space.

So in this example we have considered Total System is represented by the tensor product of the particles and we can clearly see that the final state can be factored into tensor product of each individual particle. VERTICAL SPACE OF 3CM

A system of several qubits can now be associated with a system of several QSL bits containing two internal bits each. A QSL simulation of the quantum Controlled-NOT (CNOT) gate can be constructed from two classical reversible logic CNOTs.

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Horizontal space.

Horizontal space of 3CM.

Object 1

Object 2

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Para -1 Accordingly, measurement of the phase bit will be followed by a randomization of the computational bit. These constructions of state preparation and measurement prohibit exact preparation and readout of the system.

Para -2 Devised QSL equivalents of the Deutsch-Jozsa and Simon's quantum algorithms. In the quantum algorithm, you are given a black-box quantum oracle, a unitary gate that implements f by acting on qubits, your task is to distinguish two or more families of functions.

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