Title: Analysis of heuristics for efficient job offloading to reduce energy consumption in Edge Computing

Abstract: Utilizing edge servers that are placed close to consumers, mobile edge computing (MEC) enables user devices to offload computing operations for quick execution, minimal latency, and energy conservation. User devices as a result use less energy, but edge servers use a lot of energy. As a result, in addition to considering how much energy is used by user devices, edge servers' energy use must also be considered. We will try to present efficient heuristics for job offloading from multi-user devices to multi-core edge servers with the aim of reducing the total energy consumption under the deadline constraint. The suggested heuristics begin with starting task sequences that are produced, respectively, by the well-known long task first and short task first criteria. After that, tasks from the initial task sequences are grumpily arranged in order to decrease the total amount of energy usage while still adhering to the deadline limitation. The proposed idea is basically a baseline Round-Robin algorithm.
Key: MEC, Heuristics, Round-Robin, algorithm, edge computing etc.

Related works: This section reviews related research on effective job offloading algorithms for reducing energy consumption in edge computing. There is a vast amount of fog computing literature, and analysis of heuristics for effective job offloading in fog computing has been a particularly active study area in recent years. But there is a little amount of research directly on analyzing heuristics for job offloading to reduce energy consumption in Edge Computing more specifically in Mobile Edge Computing. For recent thorough reviews, . Research on job offloading using a single MEC has been extensively studied by several academics. For a single MEC with multiple tasks and multiple users, Mazouzi et al. investigated reducing the offloading cost function, which they defined as the sum of the energy used by mobile devices during task execution.

Flow Chart:

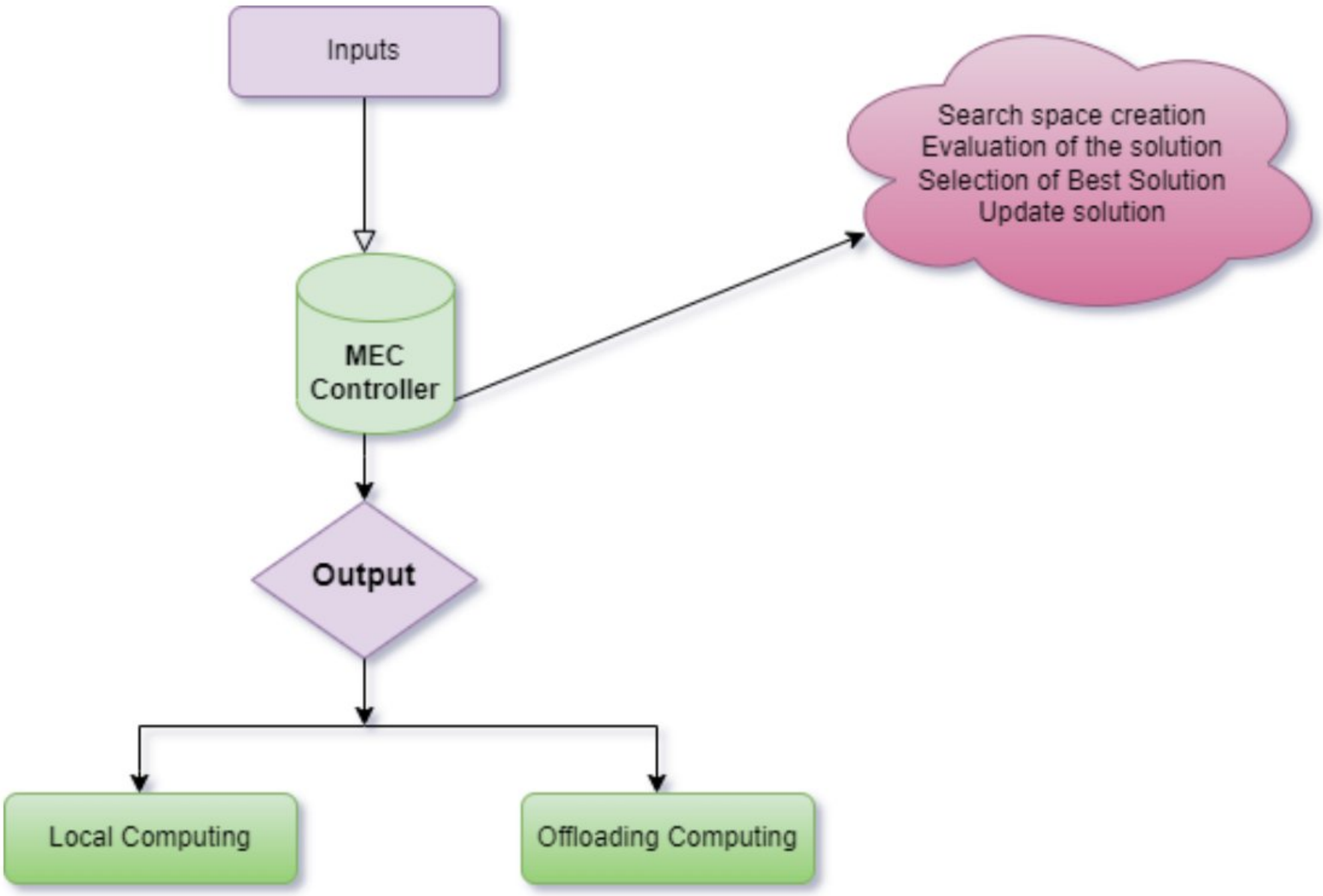
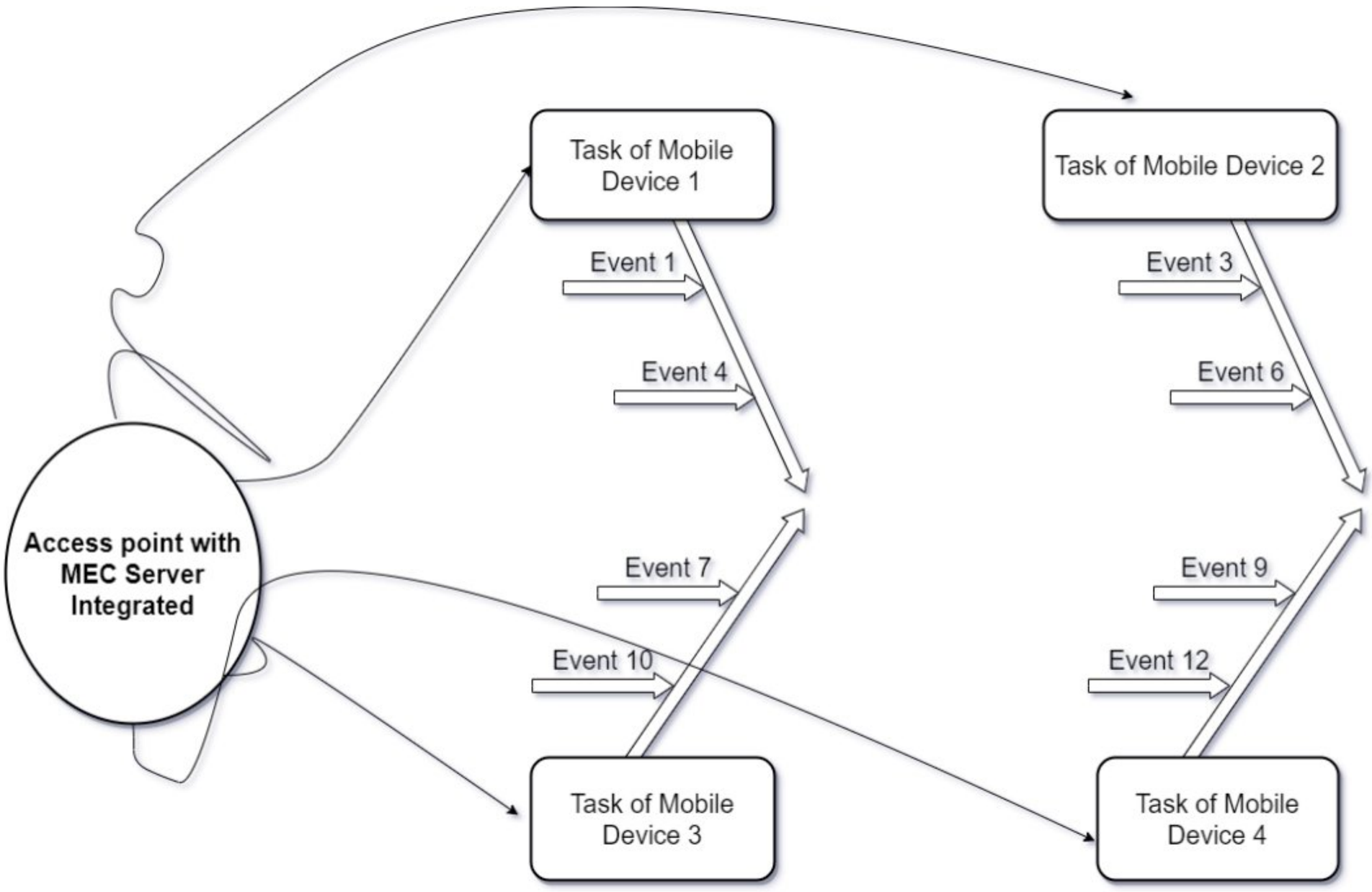


Fig: Flow Chart of MEC workings

Working Method:



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