قسمت های آبی رنگ برای دو هفته آینده باید پیاده سازی شوند و قسمت سبز رنگ اهداف ما هستند که بر اساس آن‌ها باید الگوریتم یادگیری تقوتی یا فراابتکاری را پیاده سازی کنید. قسمت Output تماما در خود ifogsim وجود دارد در نتیجه نیازی به پیاده سازی نیست و صرفا با جستجو میتوانید از توابع موجود بهره ببرید.

توجه: الگوریتم‌های فراابتکاری قسمت مقایسه که در فاز دوم نیاز به پیاده‌سازی دارند برای آن‌ها به شما رفرنس داده خواهد شد که از آن تا حدودی می‌توانید بهره ببرید.

تعداد تسک (cloudlet): {10،20،30،40،50} و {200،400،600،800،1000}

تعداد VM: {2،5،8،10} و {۵۰،100،150،200}

نمونه خروجی excel نیز برای‌تان در قالب فایل ارسال خواهد شد تا خروجی ها را مشابه آن ارسال کنید.

Paper 1: {task type: (soft real-time, periodic), task scheduling: [(q-learning, Advantage Actor-Critic (A2C)), (double q-learning)], Fault tolerance: (check pointing on jobs), resource allocation: (dynamic priority queue based on deadline), Outputs of first phase: (make span, completion time, wait time, response time, successful rate), Power: (-), Outputs of second phase: (CPU utilization, memory utilization, resource utilization, energy consumption), compare: (FCFS, SJF, Sarsa, Asynchronous Advantage Actor-Critic (A3C)), Objectives: (minimize the maximum (completion time, respose time))}

Paper 2: {task type: (hard real-time, periodic), task scheduling: [(Q-learning, Advantage Actor-Critic (A2C) ), (Distributed Q-learning)], Fault tolerance: (Cold Primary/Backup on jobs), resource allocation: (Weighted Fair Queuing), Outputs of first phase: (make span, wait time, response time, successful rate), Power: (DVFS), Outputs of second phase: (CPU utilization, memory utilization, resource utilization, energy consumption), compare: (FCFS, Sarsa, Asynchronous Advantage Actor-Critic (A3C)), Objectives: (minimize the maximum (make span, wait time, energy consumption))}

Paper 3: {task type: (soft real-time, periodic), task scheduling: [(fire hawk optimizer, Q-learning), (hybrid FHO+Q-learning)], Fault tolerance: (re-executing on jobs), resource allocation: (Q-learning), Outputs of first phase: (make span, throughput, wait time, response time, successful rate), Power: (DVFS), Outputs of second phase: (CPU utilization, memory utilization, resource utilization, energy consumption), compare: (FCFS, SJF, Advantage Actor-Critic (A2C), PSO), Objectives: (minimize the maximum (energy consumption, wait time), maximize(throughput) )}

Paper 4: {task type: (hard real-time, periodic), task scheduling: [(Artificial gorilla troops optimization, Reptile search algorithm), (hybrid GTO+RSA)], Fault tolerance: (Cold Primary/Backup on jobs), resource allocation: [(Fair), (Dynamic double queue)], Outputs of first phase: (make span, wait time, response time, successful rate), Power: (DVFS), Outputs of second phase: (CPU utilization, memory utilization, resource utilization, energy consumption), compare: (FCFS, SJF, RR, ACO, PSO), Objectives: (minimize the maximum (make span, energy consumption))}

Paper 5: {task type: (soft real-time, periodic), task scheduling: [(African vultures optimization, Golden eagle optimization), (hybrid AVO+GEO Dynamic)], Fault tolerance: (Cold Primary/Backup on jobs), resource allocation: (Fair), Outputs of first phase: (make span, wait time, response time, successful rate), Power: (-), Outputs of second phase: (CPU utilization, memory utilization, resource utilization, energy consumption), compare: (FCFS, SJF, RR, ACO, PSO), Objectives: (minimize the maximum (make span, wait time))}