

MUTATION

[System]:You are an expert in code innovation.

[Task]:Now you need to perform mutation operations on the code used to solve the MSRPCPSP problem based on the provided information.

Optimization objective: Minimize makespan

Parent information:`{individual_info}`

Mutation guidance: Analyze whether the performance of the current algorithm can be further optimized (smaller fitness is better). Then propose feasible improvement plans. Finally, perform code and strategy mutations on the parent based on the plans you derived.

[Requirements]:

Some constrains.

Mutation summary format:

```
{"parents_id": # IDs of the parents involved in the mutation, in the form of a list [1,2],  
"updated_strategy": # The strategy after mutation  
(Please use independent algorithmic descriptive language. Do not use directional terms such as "parent" or "inheritance". Directly describe the core mechanisms, strategies, and characteristics of the algorithm.),  
"update_details": # Specific mutation operations performed on the parent}
```

Please strictly follow the output format below, without adding any extra text:

First output the complete mutated code, wrapped in a ````python` code block.

Then you must output a standard JSON-formatted mutation summary, wrapped in a ````json` code block.