Exectuion flow – Single-objective Optimization

1. Executions starts from main block of main.py file.
2. Initially it extracts the data based on benchmark or actual production data
3. Then it creates an instance of co-ordinator class, which handles both Genetic algorithm (GA) and parallel tabu search (TS). Optimizer/coordinator.py.
4. Then perform GA will be called, where Optimizer/Solution/factory.py will be called to create initial population, then encoded initial population will be decoded from Optimizer/Solution/solution.py file
5. Then GA search will be performed at Optimizer/Genetic_alg/genetic_alg.py
6. Once the GA search has been finished the execution returns to main.py with best solution from GA.
7. Later as co-ordinator instance holds the GA results using the final generation of GA initial solutions will be assigned for TS in get_initial_population() function in main.py
8. Later Peform tabu search () will be called.
9. In co-ordinator class, multiple TS processes will be created then TS will be executed using multi-processing approach. Where TS for each instance at Optimizer/Tabu_search/tabu_search.py
10. Once the search has been finished from all the TS instances or processes, the co-ordinator finds the best solution from all the processes.
11. Best solution will be returned back to the main control.

Exectuion flow – Multi-objective Optimization

1. Same steps will be followed for MOO as well, whereas initial execution filename is not main.py but algorithms.py