

Code	Description	Causes	Recommendations
1	There is not a possible solution for the problem.	<p>A client with a non-flexible time window is too far that its time windows cannot be respected.</p> <p>A client is so far that no camion can go and come back in the global time window.</p> <p>A client demand exceeds the maximum vehicle capacity</p> <p>The demand of all clients exceeds the total capacity of the fleet</p>	<p>Rewrite the problem to avoid the causes of the problem: make the time window of the problematic client flexible or make the global time window flexible</p> <p>Lower the demand of the client that exceeds the maximum vehicle capacity or disable this check and configure the algorithm if a client can receive its demand in more than one delivery.</p> <p>Reduce the total demand or increase the total capacity. If a vehicle is allowed to do more than one route a day, disable this check and configure the algorithm accordingly</p>
2	NullPointerException while opening a File object for a Problem or ConfigurationParams	<p>The filename passed to the program does not exist.</p> <p>The file cannot be opened by permission requirements</p> <p>The path of the file is not the same as the program or if expressed as a relative path is unreachable.</p>	<p>Check if the names of the filenames passed to the program are correct.</p> <p>Check if the program can reach the pathname passed as the filename.</p>
3	An invalid algorithm name was received in the config file.	Incorrect name for an algorithm or algorithm implemented but not added into the list of possible algorithms in Solver.	Check the name of the algorithm in the config file is correct. If it is a new algorithm add it to the list in Solver.applyConfiguration
4	Configuration file does not exist on specified path or it is badly formed.	Client specified wrong path or the file does not exist. XML file is badly formed.	Verify that the file does exist on path and/or the path is correctly entered (Remember the default path is the workspace path). Check file integrity (HTML format)
5	Problem file does not exist on specified path.	Client specified wrong path or the file does not exist.	Verify that the file does exist on path and/or the path is correctly entered.
6	Base configuration file not found in the config file.	The tag base_config_file for an improvement algorithm is not set under the section of algorithm configurations in the config file	Pass a config file path to generate the base route under the algorithm configurations part with the tag <base_config_file>.
7	An invalid objective function name was	Incorrect name for an objective function or function implemented but not added into	Check the name of the function in the config file is correct. If it is a new function add it to the list in

	received in the config file.	the list of possible objective functions in Algorithm.	Algorithm.applyConfiguration
8	An invalid heuristic name was received in the config file.	Incorrect name for a heuristic or a heuristic implemented but not added into the list of possible heuristics in either HillClimbing, Simulated Annealing or ConstructiveAlgorithm.	Check the name of the heuristic in the config file is correct. If it is a new function add it to the list in the correspondent Algorithm
9	Error while writing on the output file: Input/Output problematic.	File modification while the program was writing to the file. File deletion while program was modifying the file.	Seek not to have any activities (direct or indirect) with any output file while the program is currently running.
10	Not enough vehicles to complete the solution	The Constructive Algorithm ran out of vehicles and there are still some clients unassigned.	Increase the number of vehicles Modify the algorithm to allow reutilization of vehicles
11	Out of range deletion in Route	The pos parameter for a route deletion is out of range ($1 \leq \text{pos} \leq n$)	Trace where is the deleteClient function be called with the out of range position. Recall that positions begin in 1 and array indexes begin in 0.
12	Out of range insertion in Route	The pos parameter for a route deletion is out of range ($1 \leq \text{pos} \leq n+1$)	Trace where the call function that causes the error is. Recall that positions begin in 1 and array indexes begin in 0.
13	Objective Function is not receiving the parameters needed	The program expected to receive certain parameters for the objective function through the config file and these were not found.	Check that the names in the parameters of the objective function in the config file match with the names expected in the code. Send any required parameter Set default values for the missing parameters
14	Heuristic is not receiving the parameters needed	The program expected to receive certain parameters for the heuristic through the config file and these were not found.	Check that the names in the parameters of the heuristic in the config file match with the names expected in the code. Send any required parameter. Set default values for the missing parameters.
15	Algorithm is not receiving the parameters needed	The program expected to receive certain parameters for the algorithm through the config file and these were not found.	Check that the names in the parameters of the algorithm in the config file match with the names expected in the code. Send any required parameter

			Set default values for the missing parameters
16	Default output path doesn't exist.	DEFAULT_OUTPUT_PATH on GUI is set to a path that does not exist on the user directory.	Check for errors in the path written.
17	Output Folder not specified or setOutputFolder not called	Deletion of line where the output folder is set to the writer (on controller), which is needed for the SimpleWriter.	Use another output method or add the setOutputFolder in the controller.
18	Writr was not set before using it.	setWriterType or WriterContext.setStrategy was not called or was called with a null argument.	Use setStrategy for the WriterContext before calling any function in it.
19	Algorithm was not set before using it.	AlgorithmContext.setStrategy was not called or was called with a null argument.	Use setStrategy for AlgorithmContext before calling any function in it.
20	Constructive heuristic was not set before using it.	ConstructiveHeuristicContext.setStrategy was not called or was called with a null argument.	Use setStrategy for ConstructiveHeuristicContext before calling any function in it.
21	Improvement heuristic was not set before using it.	ImprovementHeuristicContext.setStrategy was not called or was called with a null argument.	Use setStrategy for ImprovementHeuristicContext before calling any function in it.
22	Objective function was not set before using it.	ObjectiveFunctionContext.setStrategy was not called or was called with a null argument.	Use setStrategy for OjectiveFunctionContext before calling any function in it.
23	XML sent in configuration is not a configuration file.	File sent as a configuration file on the configuration field is not correct (does not start with the <configuration> tag)	Most likely the user selected a file which purpose is different. Check also if it is actually a configuration file, that is starts with the <configuration> tag
24	XML sent in problem is not a problem file.	File sent as a problem file on the problem field is not correct (does not start with the <instance> tag)	Most likely the user selected a file which purpose is different. Check also if it is actually a problem file, that is starts with the <instance> tag