Project Report

The parallel version of TSP contains approximately 67% of parallel code and 33% of serial code (Values found using Chat-GPT to analyze the code). It is run using 2 processors.

Therefore:-

proc = 2

fS = 0.33

fP = 0.67

Speedup = 1 / [fS + (fP/proc)] = 1 / [0.33 + (0.67/2)] = **1.5038**

Scaled Speedup = proc + (1 – proc)*fS = 2 + (1 – 2)*0.33 = **1.67**

Efficiency = speedup / proc = 1.5038 / 2 = 0.7519 = **75.19%**

However, the execution times of the parallel and serial versions of TSP do not support this speedup. We can see that the serial version is quicker. This is due to the problem size being extremely small and on a larger graph, the parallel version of TSP will likely outperform the serial version.

Table of Execution times						
	1	**2**	**3**	**4**	**5**	**Average (seconds)**
Parallel exec time (seconds)	0.001212	0.001022	0.000940	0.000909	0.001027	**0.0010220**
Serial exec time (seconds)	0.000034	0.000037	0.000034	0.000039	0.000034	**0.0000356**