

C TSPAlgorithms

□ tour: std::vector<double>
□ geneticCost: int;
□ bruteForceCost: int;

● TSPAlgorithms()
● runBruteForce(numCities: int, graph: CityGraph): double
● runGenetic(numCities: int, generations: int, percent: int, graph: CityGraph, numOfPermutations: int): void
● percentOfOptimal(): int
■ generatePermutations(&tours: std::map<double, std::vector<double>>, graph: CityGraph, percent: int): void
■ mutateTours(&tours: std::map<double, std::vector<double>>, graph: CityGraph, percent: int, rng: std::default_random_engine): void
■ generateFirstTour(cities: int): void

C Shell

● Shell()
● run(): void

C CityGraph

□ cityGraph: std::vector<std::vector<double>>
□ MAX_NUMBER_OF_COLS: int
● CityGraph()
● calculateCostOfATour(&cities: std::vector<double>): double

C Timer

□ start: std::chrono::time_point<std::chrono::system_clock>
□ stop: std::chrono::time_point<std::chrono::system_clock>
● Timer()
● startTimer(): void
● stopTimer(): void
● getElapsedTimeInMilliseconds(): int
● getFormattedTime(): std::string