Report: K-Center Problem

Introduction: As a subtask I was given to check memory and time performance of two variants of my implementation of approximation algorithm. The first variant is without distance optimization and the second one is with it.

Without DistanceOptimization

```
Number of centers 5 among 16 cities
The script uses approximately 83.18 MB
The script was running for  approximately 1s

Number of centers 5 among 1000 cities
The script uses approximately 86.77 MB
The script was running for  approximately 1s

Number of centers 100 among 1000 cities
The script uses approximately 90.32 MB
The script was running for  approximately 1s

Number of centers 500 among 1000 cities
The script uses approximately 92.37 MB
The script was running for  approximately 3s


Number of centers 999 among 1000 cities
The script uses approximately 101.94 MB
The script was running for  approximately 5s
```

With DistanceOptimization

```
Number of centers 5 among 1000 cities
The script uses approximately 91.25 MB
The script was running for  approximately 1s

Number of centers 5 among 16 cities
The script uses approximately 89.15 MB
The script was running for  approximately 1s

Number of centers 100 among 1000 cities
The script uses approximately 93.28 MB
The script was running for  approximately 1s

Number of centers 500 among 1000 cities
The script uses approximately 93.76 MB
The script was running for  approximately 1s

Number of centers 999 among 1000 cities
The script uses approximately 101.39 MB
The script was running for  approximately 1s
```