**GROUP NUMBER: 035**

**GROUP MEMBERS: Mohammadhossein Akbari Moafi, Bahador Mirzazadeh, Zahra Rahgooy**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SCALABILITY WITH RESPECT TO NUMBER OF EXECUTORS** | | | | |
| **Number of executors** | **Exact algorithm through Node Coloring**  **C=8 colors, R=3 runs, file: orkut4M.txt** | | **Approximation through Node Coloring**  **C=16 colors, R=3 runs, file: orkut4M.txt** | |
| Exact number of triangles | Total running time in seconds (mean of 3 runs) | Approx. number of triangles (median of 3 runs) | Total running time in seconds (mean of 3 runs) |
| 2 | 12184731 | 171253 | 11322112 | 10769 |
| 4 | 12184731 | 134864 | 11356160 | 8920 |
| 8 | 12184731 | 103047 | 11403520 | 27544 |
| 16 | 12184731 | 72258 | 11359232 | 7041 |

|  |  |  |
| --- | --- | --- |
| **SCALABILITY WITH RESPECT TO INPUT SIZE** | | |
| **Dataset** | **Approximation through Node Coloring**  **C=8 colors, R=3 runs, 8 executors** | |
| Approx. number of triangles (median of 3 runs) | Total running time in seconds (mean of 3 runs) |
| Orkut1M | 3049152 | 4106 |
| Orkut4M | 12097557 | 20865 |
| Orkut16M | 52099776 | 33299 |
| Orkut64M | 323804352 | 39575 |
| Orkut117M |  |  |