Exercise 2: Finite Element Method

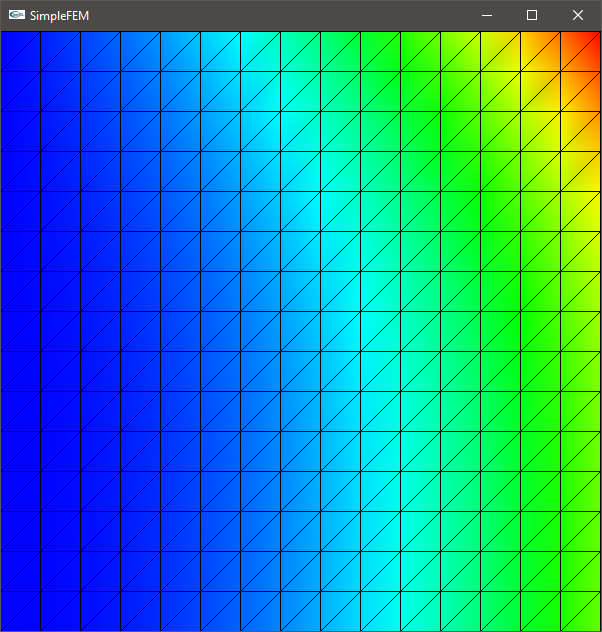
Benjamin Bürgisser 12-736-278 / Jakob Jakob 12-917-415 / Henry Raymond 08-928-061

Task 5: Error norms

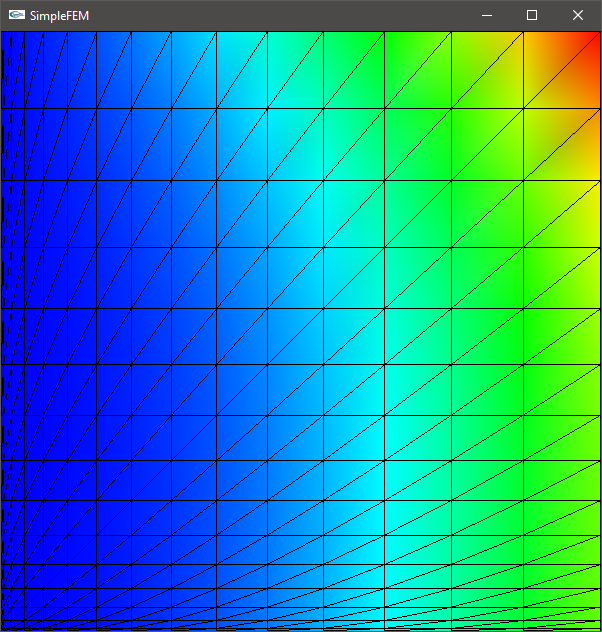
Hint: gradedMesh = false

|  |  |  |
| --- | --- | --- |
| **Grid Resolution** | **Laplace Problem** | **Poisson Problem** |
| **3** | 0.004117 | 0.041667 |
| **5** | 0.001457 | 0.014144 |
| **8** | 0.000514 | 0.004937 |
| **16** | 0.000115 | 0.001103 |
| **32** | 0.000027 | 0.000260 |

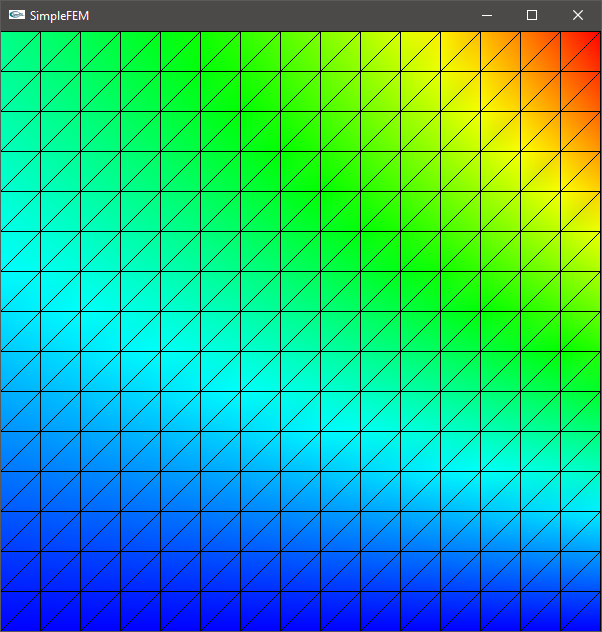
Results



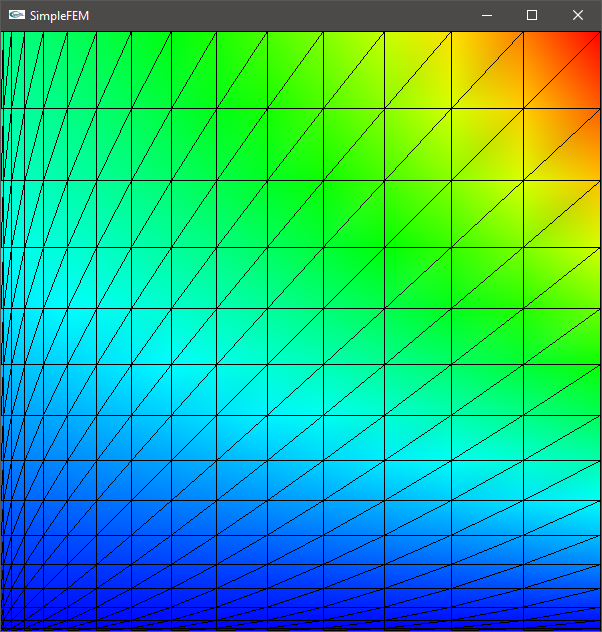
gridSize = 16; gradedMesh = false; laplaceProblem = false;



gridSize = 16; gradedMesh = false; laplaceProblem = false;



gridSize = 16; gradedMesh = false; laplaceProblem = true;



gridSize = 16; gradedMesh = true; laplaceProblem = true;