**PDP Lab. 1**

**- documentation -**

**Concurrency**

* the synchronized methods of the *service.SupermarketService* class,

**public synchronized void** processBill(Bill bill)

**public synchronized void** checkInventory()

obtain a lock on the *service.SupermarketService* class instance and its fields, namely *repository.Repository<Product>* and *repository.Repository<Bill>*, assuring the correctness of data

**Performance**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No. of Products** | **No. of Bills** | **Average No. of Products per Bill** | **No. of Threads** | **Time (ms)** |
| 33 | 5 | 5.8 | 3 | 40 |
| 10 | 5 | 5 | 1 | 0 |
| 40 | 10 | 6.7 | 4 | 37 |
| 84 | 6 | 3.83 | 3 | 3 |
| 53 | 8 | 5.12 | 3 | 35 |
| 2879 | 134 | 5.78 | 3 | 80 |
| 2918 | 147 | 5.19 | 6 | 61 |
| 7612 | 170 | 5.45 | 8 | 65 |
| 9972 | 336 | 494.33 | 9 | 91 |