| Algorithmics | Student information | | Date | Number of session |
|---|---|---|---|---|
| | UO: UO269412 | | | 5 |
| | Surname: Carrillo | | | |
| | Name: Javier | | | |

Escuela de Ingeniería Informática
Universidad de Oviedo

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## Activity 1. Table made "manually"

| 1/t | 2/t | 3/t | 4/t | 5/t | 6/t | 7/t | 8/t | 9/t | 10/t | 11/t | 12/t | 13/t | 14/t |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/f | 2/f | 1/t | 2/t | 3/t | 2/t | 3/t | 4/t | 3/t | 4/t | 5/t | 4/t | 5/t | 6/t |
| 1/f | 2/f | 1/f | 2/f | 3/f | 1/t | 2/t | 3/t | 2/t | 37T | 4/T | 2/t | 3/t | 4/t |

## Activity 2. ExchangeTimes

| n | time |
|---|---|
| 40000 | 5 |
| 80000 | 9 |
| 160000 | 13 |
| 320000 | 32 |
| 640000 | 38 |
| 1280000 | 97 |
| 2560000 | 151 |
| 5120000 | 327 |
| 10240000 | 710 |
| 20480000 | 1383 |

The complexity of this algorithm is linear due to the low sample of coins, even though the algorithm contains two unchained loops. For example, the theoretical value of n = 5120000 should be 302 and it is 327, the same goes for n = 10240000, that should have a theoretical value of 654, close to the obtained 710.