Nume: Mateescu Viorel-Cristian  
Grupa: 322CB

Rezolvari examen CB – Memoria Cache

Imi cer scuze pentru tabelul haotic de la a)  
M-am grabit, va rog frumos sa nu-mi scadeti foarte mult

**a)**

**B=C/L=32/2=16 seturi**

**Ignoram 2 + log2 (lungime cuvant) = 2 + log2(2) = 3 biti**

**Miss Rate = 11/17=64.70%**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Binar | Operatia | Tip | Set 0 | Set 1 | Set 2 | Set 3 | Set 4 | Set 5 | Set 6 | Set 7 | Set 8 | Set 9 | Set 10 | Set 11 | Set 12 | Set 13 | Set 14 | Set 15 |
| 0000 00000 | **LD 0H** | **MISS**  **Compulsory** | **0** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0000 01000 | **LD 8H** | **MISS(Comp)** | **0** | **1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0000 10110 | **LD 16H** | **MISS(comp)** | **0** | **1** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0000 00000 | **ST 0H** | **HIT** | **0** | **1** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0000  10010 | **LD 12H** | **HIT** | **0** | **1** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0000 01000 | **LD 8H** | **HIT** | **0** | **1** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0001001  00000 | **ST 120H** | **MISS Compulsory** | **32** | **1** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0000 01000 | **LD 8H** | **HIT** | **0** | **1** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0000 10110 | **ST16H** | **HIT** | **0** | **1** | **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0011  10010 | **LD72H** | **MiSS**  **COmpulsory** | **0** | **1** | **2** |  |  |  |  |  |  |  |  |  |  |  | **14** |  |
| 0001  00111 | **LD 27H** | **MISS**  **COmpulsory** | **0** | **1** | **2** |  | **4** |  |  |  |  |  |  |  |  |  | **14** |  |
| 10001  10110 | **LD 236H** | **MISS**  **Compulsory** | **0** | **1** | **2** |  | **4** |  | **70** |  |  |  |  |  |  |  | **14** |  |
| 11000  00000 | **LD 300H** | **MISS**  **Compulsory** | **96** | **1** | **2** |  | **4** |  | **70** |  |  |  |  |  |  |  | **14** |  |
| 1001  10010 | **LD 132H** | **Miss Compulsory** | **96** | **1** | **2** |  | **4** |  | **38** |  |  |  |  |  |  |  | **14** |  |
| 1000  10110 | **ST 116H** | **Miss Compulsory** | **96** | **1** | **16** |  | **4** |  | **38** |  |  |  |  |  |  |  | **14** |  |
| 0000  00000 | **ST 0H** | **Miss Compulsory** | **0** | **1** | **16** |  | **4** |  | **38** |  |  |  |  |  |  |  | **14** |  |
| 1000  10100 | **LD 144H** | **HIT** | **0** | **1** | **16** |  | **4** |  | **38** |  |  |  |  |  |  |  | **14** |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Set 0 | | | |  | | | | Set 1 | | | |  | | | |
| Binar | Operatia | Tip | Cale 0 | Cale 1 | Cale 2 | Cale 3 | Cale 4 | Cale 5 | Cale  6 | Cale 7 | Cale 0 | Cale 1 | Cale 2 | Cale 3 | Cale 4 | Cale 5 | Cale 6 | Cale 7 |
| 0000 00000 | **LD 0h** | **MISS**  **Compulsory** | **0h** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0000 01000 | **LD 8h** | **Miss Compulsory** | **0h** |  |  |  |  |  |  |  | **1h** |  |  |  |  |  |  |  |
| 0000 10110 | **LD 16h** | **Miss Compulsory** | **0h** | **2h** |  |  |  |  |  |  | **1h** |  |  |  |  |  |  |  |
| 0000 00000 | **ST 0h** | **HIT** | **0h** | **2h** |  |  |  |  |  |  | **1h** |  |  |  |  |  |  |  |
| 0000  10010 | **LD 12h** | **HIT** | **0h** | **2h** |  |  |  |  |  |  | **1h** |  |  |  |  |  |  |  |
| 0000 01000 | **LD 8h** | **HIT** | **0h** | **2h** |  |  |  |  |  |  | **1h** |  |  |  |  |  |  |  |
| 0001001  00000 | **ST 120h** | **MISS Compulsory** | **0h** | **2h** | **24h** |  |  |  |  |  | **1h** |  |  |  |  |  |  |  |
| 0000 01000 | **LD 8h** | **HIT** | **0h** | **2h** | **24h** |  |  |  |  |  | **1h** |  |  |  |  |  |  |  |
| 0000 10110 | **ST 16h** | **HIT** | **16h** | **2h** | **24h** |  |  |  |  |  | **1h** |  |  |  |  |  |  |  |
| 0011  10010 | **LD 72h** | **MiSS**  **COmpulsory** | **72h** | **2h** | **24h** | **Eh** |  |  |  |  | **1h** |  |  |  |  |  |  |  |
| 0001  00111 | **LD 27h** | **MISS**  **COmpulsory** | **27** | **2h** | **24h** | **Eh** | **4h** |  |  |  | **1h** |  |  |  |  |  |  |  |
| 10001  10110 | **LD 236h** | **MISS**  **Compulsory** | **236** | **2h** | **24h** | **Eh** | **4h** | **46h** |  |  | **1h** |  |  |  |  |  |  |  |
| 11000  00000 | **LD 300h** | **MISS**  **Compulsory** | **300** | **2h** | **24h** | **Eh** | **4h** | **46h** | **60** |  | **1h** |  |  |  |  |  |  |  |
| 1001  10010 | **LD 132h** | **Miss Compulsory** | **0** | **2h** | **24h** | **Eh** | **4h** | **46h** | **60** | **26h** | **1h** |  |  |  |  |  |  |  |
| 1000  10110 | **ST 116h** | **Miss Compulsory** | **22h** | **2h** | **24h** | **Eh** | **4h** | **46h** | **60** | **26h** | **1h** |  |  |  |  |  |  |  |
| 0000  00000 | **ST 0h** | **Miss Compulsory** | **22h** | **0h** | **24h** | **Eh** | **4h** | **46h** | **60** | **26h** | **1h** |  |  |  |  |  |  |  |
| 1000  10100 | **LD 114h** | **HIT** | **22h** | **0h** | **24h** | **Eh** | **4h** | **46h** | **60** | **26h** | **1h** |  |  |  |  |  |  |  |

Miss Rate = 11/17= 64.70%

c)

Cazul memoria Cache cu corespondenta directa, MR=64.70%

AMAT=1+64.70/100\*100=65.70

Cazul memoria Cache cu corespondenta set-asociativ N=8 MR= 64.70%

AMAT=1+64.70/100\*100=65.77



