CS2055 HW8

Fangzheng Guo, Shibo Xing, Zhuolun Li

1. Extendible hashing structure:

Global: (3)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 000 | 001 | 010 | 011 | 100 | 101 | 110 | 111 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 0 (1) | 111 (3) | 011 (3) | 101 (3) | 001 (3) |
| 2 = 10  19 = 10100  4 = 100 | 31 = 11111  7 = 111  23 = 10111 | 11 = 1011  3 = 011  19 = 10011 | 29 = 11101  5 = 101 | 9 = 1001  17 = 10001  25 = 11001 |

1. B+ tree

|  |  |  |  |
| --- | --- | --- | --- |
| 7 | 15 |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 17 | 19 | 20 | 29 |

|  |  |  |  |
| --- | --- | --- | --- |
| 2 | 3 | 5 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 7 | 8 | 11 |  |

1. B+ steps

|  |  |  |  |
| --- | --- | --- | --- |
| 7 | 15 |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 17 | 19 | 20 | 29 |

|  |  |  |  |
| --- | --- | --- | --- |
| 3 | 5 |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 7 | 8 | 11 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 15 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 17 | 20 | 29 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 7 | 8 | 11 |  |



|  |  |  |  |
| --- | --- | --- | --- |
| 7 | 15 |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 17 | 20 | 29 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 5 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 7 | 8 | 11 |  |