Homework week 5

Set, Hash and Map

1. Two desirable properties of a hash function:

- Deterministic, Uniform distribution

1. Assume collisions are handled by chaining:

Index 0:

Index 1: 20,

Index 2:

Index 3:

Index 4: 16, 5

Index 5: 44, 88, 11

Index 6: 94, 39

Index 7: 12, 23

Index 8:

Index 9: 13

Index 10:

Assume collisions are handled by linear probing:

Index 0: 11

Index 1: 39

Index 2: 20

Index 3: 5

Index 4: 16

Index 5: 44

Index 6: 88

Index 7: 12

Index 8: 23

Index 9: 13

Index 10: 94

1. Assume collisions are handled by chaining:

Index 0:

Index 1:

Index 2: 16

Index 3:

Index 4: 1, 18, 35

Index 5: 36

Index 6: 3, 20

Index 7:

Index 8:

Index 9: 23

Index 10:

Index 11: 8

Index 12:

Index 13:

Index 14: 11

Index 15:

Index 16:

Assume collisions are handled by linear probing:

Index 0:

Index 1:

Index 2: 16

Index 3:

Index 4: 1

Index 5: 18

Index 6: 3

Index 7: 35

Index 8: 36

Index 9: 23

Index 10: 20

Index 11: 8

Index 12:

Index 13:

Index 14: 11

Index 15:

Index 16:

1. Code.