# HashMap Test Output

complexMap:

bucket 0:

key = (9, 9); value = mike

bucket 1:

key = (2, 3); value = quebec

key = (3, 2); value = sierra

key = (5, 4); value = uniform

key = (7, 6); value = yankee

bucket 2:

key = (6, 4); value = tango

key = (10, 8); value = x-ray

bucket 3:

key = (0, 3); value = kilo

key = (2, 1); value = november

key = (7, 4); value = papa

key = (10, 9); value = zulu

bucket 4:

key = (7, 3); value = whiskey

bucket 5:

key = (1, 4); value = romeo

key = (4, 1); value = victor

bucket 6:

key = (6, 0); value = lima

key = (4, 2); value = oscar

kfiMap:

bucket 0:

key = (53, 59, 61, 67, 71); value = november

bucket 1:

key = (31, 37, 41, 43, 47); value = mike

bucket 2:

key = (179, 181, 191, 193, 197); value = sierra

bucket 3:

key = (199, 211, 521, 607, 1279); value = tango

key = (524287, 756839, 859433, 1257787, 1398269); value = yankee

key = (2976221, 3021377, 6972593, 13466917, 2147483647); value = zulu

bucket 5:

key = (13, 17, 19, 23, 29); value = lima

bucket 7:

key = (101, 103, 107, 109, 113); value = papa

key = (4253, 4423, 8191, 9689, 9941); value = victor

bucket 8:

key = (2, 3, 5, 7, 11); value = kilo

key = (127, 131, 137, 139, 149); value = quebec

bucket 9:

key = (151, 157, 163, 167, 173); value = romeo

key = (86243, 110503, 131071, 132049, 216091); value = x-ray

bucket 10:

key = (73, 79, 83, 89, 97); value = oscar

key = (1093, 2203, 2281, 3217, 3511); value = uniform

key = (11213, 19937, 21701, 23209, 44497); value = whiskey

Press ENTER to continue...

Testing insertion with a NULL value...

Testing search and remove: key not found. Inserting with default value...

complexMap:

bucket 0:

key = (9, 9); value = mike

bucket 1:

key = (2, 3); value = quebec

key = (3, 2); value = sierra

key = (5, 4); value = uniform

key = (7, 6); value = yankee

bucket 2:

key = (6, 4); value = tango

key = (10, 8); value = x-ray

bucket 3:

key = (0, 3); value = kilo

key = (2, 1); value = november

key = (7, 4); value = papa

key = (10, 9); value = zulu

key = (9, 10); value = {0}

bucket 4:

key = (7, 3); value = whiskey

bucket 5:

key = (1, 4); value = romeo

key = (4, 1); value = victor

bucket 6:

key = (6, 0); value = lima

key = (4, 2); value = oscar

Testing search and remove: key not found. Inserting with default value...

kfiMap:

bucket 0:

key = (53, 59, 61, 67, 71); value = november

bucket 1:

key = (31, 37, 41, 43, 47); value = mike

bucket 2:

key = (179, 181, 191, 193, 197); value = sierra

bucket 3:

key = (199, 211, 521, 607, 1279); value = tango

key = (524287, 756839, 859433, 1257787, 1398269); value = yankee

key = (2976221, 3021377, 6972593, 13466917, 2147483647); value = zulu

bucket 4:

key = (0, 1, 2, 3, 4); value = NULL

bucket 5:

key = (13, 17, 19, 23, 29); value = lima

bucket 7:

key = (101, 103, 107, 109, 113); value = papa

key = (4253, 4423, 8191, 9689, 9941); value = victor

bucket 8:

key = (2, 3, 5, 7, 11); value = kilo

key = (127, 131, 137, 139, 149); value = quebec

bucket 9:

key = (151, 157, 163, 167, 173); value = romeo

key = (86243, 110503, 131071, 132049, 216091); value = x-ray

bucket 10:

key = (73, 79, 83, 89, 97); value = oscar

key = (1093, 2203, 2281, 3217, 3511); value = uniform

key = (11213, 19937, 21701, 23209, 44497); value = whiskey

Press ENTER to continue...

Testing replacement of value (victor -> victoria):

complexMap:

bucket 0:

key = (9, 9); value = mike

bucket 1:

key = (2, 3); value = quebec

key = (3, 2); value = sierra

key = (5, 4); value = uniform

key = (7, 6); value = yankee

bucket 2:

key = (6, 4); value = tango

key = (10, 8); value = x-ray

bucket 3:

key = (0, 3); value = kilo

key = (2, 1); value = november

key = (7, 4); value = papa

key = (10, 9); value = zulu

key = (9, 10); value = {0}

bucket 4:

key = (7, 3); value = whiskey

bucket 5:

key = (1, 4); value = romeo

key = (4, 1); value = victoria

bucket 6:

key = (6, 0); value = lima

key = (4, 2); value = oscar

kfiMap:

bucket 0:

key = (53, 59, 61, 67, 71); value = november

bucket 1:

key = (31, 37, 41, 43, 47); value = mike

bucket 2:

key = (179, 181, 191, 193, 197); value = sierra

bucket 3:

key = (199, 211, 521, 607, 1279); value = tango

key = (524287, 756839, 859433, 1257787, 1398269); value = yankee

key = (2976221, 3021377, 6972593, 13466917, 2147483647); value = zulu

bucket 4:

key = (0, 1, 2, 3, 4); value = NULL

bucket 5:

key = (13, 17, 19, 23, 29); value = lima

bucket 7:

key = (101, 103, 107, 109, 113); value = papa

key = (4253, 4423, 8191, 9689, 9941); value = victoria

bucket 8:

key = (2, 3, 5, 7, 11); value = kilo

key = (127, 131, 137, 139, 149); value = quebec

bucket 9:

key = (151, 157, 163, 167, 173); value = romeo

key = (86243, 110503, 131071, 132049, 216091); value = x-ray

bucket 10:

key = (73, 79, 83, 89, 97); value = oscar

key = (1093, 2203, 2281, 3217, 3511); value = uniform

key = (11213, 19937, 21701, 23209, 44497); value = whiskey

Press ENTER to continue...

Testing search and removal of the only element in a bucket...

Testing search and remove: key = (9, 9); value = mike

complexMap:

bucket 1:

key = (2, 3); value = quebec

key = (3, 2); value = sierra

key = (5, 4); value = uniform

key = (7, 6); value = yankee

bucket 2:

key = (6, 4); value = tango

key = (10, 8); value = x-ray

bucket 3:

key = (0, 3); value = kilo

key = (2, 1); value = november

key = (7, 4); value = papa

key = (10, 9); value = zulu

key = (9, 10); value = {0}

bucket 4:

key = (7, 3); value = whiskey

bucket 5:

key = (1, 4); value = romeo

key = (4, 1); value = victoria

bucket 6:

key = (6, 0); value = lima

key = (4, 2); value = oscar

Testing search and remove: key = (13, 17, 19, 23, 29); value = lima

kfiMap:

bucket 0:

key = (53, 59, 61, 67, 71); value = november

bucket 1:

key = (31, 37, 41, 43, 47); value = mike

bucket 2:

key = (179, 181, 191, 193, 197); value = sierra

bucket 3:

key = (199, 211, 521, 607, 1279); value = tango

key = (524287, 756839, 859433, 1257787, 1398269); value = yankee

key = (2976221, 3021377, 6972593, 13466917, 2147483647); value = zulu

bucket 4:

key = (0, 1, 2, 3, 4); value = NULL

bucket 7:

key = (101, 103, 107, 109, 113); value = papa

key = (4253, 4423, 8191, 9689, 9941); value = victoria

bucket 8:

key = (2, 3, 5, 7, 11); value = kilo

key = (127, 131, 137, 139, 149); value = quebec

bucket 9:

key = (151, 157, 163, 167, 173); value = romeo

key = (86243, 110503, 131071, 132049, 216091); value = x-ray

bucket 10:

key = (73, 79, 83, 89, 97); value = oscar

key = (1093, 2203, 2281, 3217, 3511); value = uniform

key = (11213, 19937, 21701, 23209, 44497); value = whiskey

Press ENTER to continue...

Testing search and removal of the first element in a bucket...

Testing search and remove: key = (0, 3); value = kilo

complexMap:

bucket 1:

key = (2, 3); value = quebec

key = (3, 2); value = sierra

key = (5, 4); value = uniform

key = (7, 6); value = yankee

bucket 2:

key = (6, 4); value = tango

key = (10, 8); value = x-ray

bucket 3:

key = (2, 1); value = november

key = (7, 4); value = papa

key = (10, 9); value = zulu

key = (9, 10); value = {0}

bucket 4:

key = (7, 3); value = whiskey

bucket 5:

key = (1, 4); value = romeo

key = (4, 1); value = victoria

bucket 6:

key = (6, 0); value = lima

key = (4, 2); value = oscar

Testing search and remove: key = (101, 103, 107, 109, 113); value = papa

kfiMap:

bucket 0:

key = (53, 59, 61, 67, 71); value = november

bucket 1:

key = (31, 37, 41, 43, 47); value = mike

bucket 2:

key = (179, 181, 191, 193, 197); value = sierra

bucket 3:

key = (199, 211, 521, 607, 1279); value = tango

key = (524287, 756839, 859433, 1257787, 1398269); value = yankee

key = (2976221, 3021377, 6972593, 13466917, 2147483647); value = zulu

bucket 4:

key = (0, 1, 2, 3, 4); value = NULL

bucket 7:

key = (4253, 4423, 8191, 9689, 9941); value = victoria

bucket 8:

key = (2, 3, 5, 7, 11); value = kilo

key = (127, 131, 137, 139, 149); value = quebec

bucket 9:

key = (151, 157, 163, 167, 173); value = romeo

key = (86243, 110503, 131071, 132049, 216091); value = x-ray

bucket 10:

key = (73, 79, 83, 89, 97); value = oscar

key = (1093, 2203, 2281, 3217, 3511); value = uniform

key = (11213, 19937, 21701, 23209, 44497); value = whiskey

Press ENTER to continue...

Testing search and removal of a middle element in a bucket...

Testing search and remove: key = (5, 4); value = uniform

complexMap:

bucket 1:

key = (2, 3); value = quebec

key = (3, 2); value = sierra

key = (7, 6); value = yankee

bucket 2:

key = (6, 4); value = tango

key = (10, 8); value = x-ray

bucket 3:

key = (2, 1); value = november

key = (7, 4); value = papa

key = (10, 9); value = zulu

key = (9, 10); value = {0}

bucket 4:

key = (7, 3); value = whiskey

bucket 5:

key = (1, 4); value = romeo

key = (4, 1); value = victoria

bucket 6:

key = (6, 0); value = lima

key = (4, 2); value = oscar

Testing search and remove: key = (524287, 756839, 859433, 1257787, 1398269); value = yankee

kfiMap:

bucket 0:

key = (53, 59, 61, 67, 71); value = november

bucket 1:

key = (31, 37, 41, 43, 47); value = mike

bucket 2:

key = (179, 181, 191, 193, 197); value = sierra

bucket 3:

key = (199, 211, 521, 607, 1279); value = tango

key = (2976221, 3021377, 6972593, 13466917, 2147483647); value = zulu

bucket 4:

key = (0, 1, 2, 3, 4); value = NULL

bucket 7:

key = (4253, 4423, 8191, 9689, 9941); value = victoria

bucket 8:

key = (2, 3, 5, 7, 11); value = kilo

key = (127, 131, 137, 139, 149); value = quebec

bucket 9:

key = (151, 157, 163, 167, 173); value = romeo

key = (86243, 110503, 131071, 132049, 216091); value = x-ray

bucket 10:

key = (73, 79, 83, 89, 97); value = oscar

key = (1093, 2203, 2281, 3217, 3511); value = uniform

key = (11213, 19937, 21701, 23209, 44497); value = whiskey

Press ENTER to continue...

Testing search and removal of the last element in a bucket...

Testing search and remove: key = (7, 6); value = yankee

complexMap:

bucket 1:

key = (2, 3); value = quebec

key = (3, 2); value = sierra

bucket 2:

key = (6, 4); value = tango

key = (10, 8); value = x-ray

bucket 3:

key = (2, 1); value = november

key = (7, 4); value = papa

key = (10, 9); value = zulu

key = (9, 10); value = {0}

bucket 4:

key = (7, 3); value = whiskey

bucket 5:

key = (1, 4); value = romeo

key = (4, 1); value = victoria

bucket 6:

key = (6, 0); value = lima

key = (4, 2); value = oscar

Testing search and remove: key = (11213, 19937, 21701, 23209, 44497); value = whiskey

kfiMap:

bucket 0:

key = (53, 59, 61, 67, 71); value = november

bucket 1:

key = (31, 37, 41, 43, 47); value = mike

bucket 2:

key = (179, 181, 191, 193, 197); value = sierra

bucket 3:

key = (199, 211, 521, 607, 1279); value = tango

key = (2976221, 3021377, 6972593, 13466917, 2147483647); value = zulu

bucket 4:

key = (0, 1, 2, 3, 4); value = NULL

bucket 7:

key = (4253, 4423, 8191, 9689, 9941); value = victoria

bucket 8:

key = (2, 3, 5, 7, 11); value = kilo

key = (127, 131, 137, 139, 149); value = quebec

bucket 9:

key = (151, 157, 163, 167, 173); value = romeo

key = (86243, 110503, 131071, 132049, 216091); value = x-ray

bucket 10:

key = (73, 79, 83, 89, 97); value = oscar

key = (1093, 2203, 2281, 3217, 3511); value = uniform

Press ENTER to continue...

Process finished with exit code 0