/\* ----------------------------------------------------------------------------

\* This file was automatically generated by SWIG (http://www.swig.org).

\* Version 4.0.2

\*

\* Do not make changes to this file unless you know what you are doing--modify

\* the SWIG interface file instead.

\* ----------------------------------------------------------------------------- \*/

package com.twitter.ann.faiss;

public class IndexHNSW extends Index {

private transient long swigCPtr;

protected IndexHNSW(long cPtr, boolean cMemoryOwn) {

super(swigfaissJNI.IndexHNSW\_SWIGUpcast(cPtr), cMemoryOwn);

swigCPtr = cPtr;

}

protected static long getCPtr(IndexHNSW obj) {

return (obj == null) ? 0 : obj.swigCPtr;

}

@SuppressWarnings("deprecation")

protected void finalize() {

delete();

}

public synchronized void delete() {

if (swigCPtr != 0) {

if (swigCMemOwn) {

swigCMemOwn = false;

swigfaissJNI.delete\_IndexHNSW(swigCPtr);

}

swigCPtr = 0;

}

super.delete();

}

public void setHnsw(HNSW value) {

swigfaissJNI.IndexHNSW\_hnsw\_set(swigCPtr, this, HNSW.getCPtr(value), value);

}

public HNSW getHnsw() {

long cPtr = swigfaissJNI.IndexHNSW\_hnsw\_get(swigCPtr, this);

return (cPtr == 0) ? null : new HNSW(cPtr, false);

}

public void setOwn\_fields(boolean value) {

swigfaissJNI.IndexHNSW\_own\_fields\_set(swigCPtr, this, value);

}

public boolean getOwn\_fields() {

return swigfaissJNI.IndexHNSW\_own\_fields\_get(swigCPtr, this);

}

public void setStorage(Index value) {

swigfaissJNI.IndexHNSW\_storage\_set(swigCPtr, this, Index.getCPtr(value), value);

}

public Index getStorage() {

long cPtr = swigfaissJNI.IndexHNSW\_storage\_get(swigCPtr, this);

return (cPtr == 0) ? null : new Index(cPtr, false);

}

public void setReconstruct\_from\_neighbors(ReconstructFromNeighbors value) {

swigfaissJNI.IndexHNSW\_reconstruct\_from\_neighbors\_set(swigCPtr, this, ReconstructFromNeighbors.getCPtr(value), value);

}

public ReconstructFromNeighbors getReconstruct\_from\_neighbors() {

long cPtr = swigfaissJNI.IndexHNSW\_reconstruct\_from\_neighbors\_get(swigCPtr, this);

return (cPtr == 0) ? null : new ReconstructFromNeighbors(cPtr, false);

}

public IndexHNSW(int d, int M, MetricType metric) {

this(swigfaissJNI.new\_IndexHNSW\_\_SWIG\_0(d, M, metric.swigValue()), true);

}

public IndexHNSW(int d, int M) {

this(swigfaissJNI.new\_IndexHNSW\_\_SWIG\_1(d, M), true);

}

public IndexHNSW(int d) {

this(swigfaissJNI.new\_IndexHNSW\_\_SWIG\_2(d), true);

}

public IndexHNSW() {

this(swigfaissJNI.new\_IndexHNSW\_\_SWIG\_3(), true);

}

public IndexHNSW(Index storage, int M) {

this(swigfaissJNI.new\_IndexHNSW\_\_SWIG\_4(Index.getCPtr(storage), storage, M), true);

}

public IndexHNSW(Index storage) {

this(swigfaissJNI.new\_IndexHNSW\_\_SWIG\_5(Index.getCPtr(storage), storage), true);

}

public void add(long n, SWIGTYPE\_p\_float x) {

swigfaissJNI.IndexHNSW\_add(swigCPtr, this, n, SWIGTYPE\_p\_float.getCPtr(x));

}

public void train(long n, SWIGTYPE\_p\_float x) {

swigfaissJNI.IndexHNSW\_train(swigCPtr, this, n, SWIGTYPE\_p\_float.getCPtr(x));

}

public void search(long n, SWIGTYPE\_p\_float x, long k, SWIGTYPE\_p\_float distances, LongVector labels) {

swigfaissJNI.IndexHNSW\_search(swigCPtr, this, n, SWIGTYPE\_p\_float.getCPtr(x), k, SWIGTYPE\_p\_float.getCPtr(distances), SWIGTYPE\_p\_long\_long.getCPtr(labels.data()), labels);

}

public void reconstruct(long key, SWIGTYPE\_p\_float recons) {

swigfaissJNI.IndexHNSW\_reconstruct(swigCPtr, this, key, SWIGTYPE\_p\_float.getCPtr(recons));

}

public void reset() {

swigfaissJNI.IndexHNSW\_reset(swigCPtr, this);

}

public void shrink\_level\_0\_neighbors(int size) {

swigfaissJNI.IndexHNSW\_shrink\_level\_0\_neighbors(swigCPtr, this, size);

}

public void search\_level\_0(long n, SWIGTYPE\_p\_float x, long k, SWIGTYPE\_p\_int nearest, SWIGTYPE\_p\_float nearest\_d, SWIGTYPE\_p\_float distances, LongVector labels, int nprobe, int search\_type) {

swigfaissJNI.IndexHNSW\_search\_level\_0\_\_SWIG\_0(swigCPtr, this, n, SWIGTYPE\_p\_float.getCPtr(x), k, SWIGTYPE\_p\_int.getCPtr(nearest), SWIGTYPE\_p\_float.getCPtr(nearest\_d), SWIGTYPE\_p\_float.getCPtr(distances), SWIGTYPE\_p\_long\_long.getCPtr(labels.data()), labels, nprobe, search\_type);

}

public void search\_level\_0(long n, SWIGTYPE\_p\_float x, long k, SWIGTYPE\_p\_int nearest, SWIGTYPE\_p\_float nearest\_d, SWIGTYPE\_p\_float distances, LongVector labels, int nprobe) {

swigfaissJNI.IndexHNSW\_search\_level\_0\_\_SWIG\_1(swigCPtr, this, n, SWIGTYPE\_p\_float.getCPtr(x), k, SWIGTYPE\_p\_int.getCPtr(nearest), SWIGTYPE\_p\_float.getCPtr(nearest\_d), SWIGTYPE\_p\_float.getCPtr(distances), SWIGTYPE\_p\_long\_long.getCPtr(labels.data()), labels, nprobe);

}

public void search\_level\_0(long n, SWIGTYPE\_p\_float x, long k, SWIGTYPE\_p\_int nearest, SWIGTYPE\_p\_float nearest\_d, SWIGTYPE\_p\_float distances, LongVector labels) {

swigfaissJNI.IndexHNSW\_search\_level\_0\_\_SWIG\_2(swigCPtr, this, n, SWIGTYPE\_p\_float.getCPtr(x), k, SWIGTYPE\_p\_int.getCPtr(nearest), SWIGTYPE\_p\_float.getCPtr(nearest\_d), SWIGTYPE\_p\_float.getCPtr(distances), SWIGTYPE\_p\_long\_long.getCPtr(labels.data()), labels);

}

public void init\_level\_0\_from\_knngraph(int k, SWIGTYPE\_p\_float D, LongVector I) {

swigfaissJNI.IndexHNSW\_init\_level\_0\_from\_knngraph(swigCPtr, this, k, SWIGTYPE\_p\_float.getCPtr(D), SWIGTYPE\_p\_long\_long.getCPtr(I.data()), I);

}

public void init\_level\_0\_from\_entry\_points(int npt, SWIGTYPE\_p\_int points, SWIGTYPE\_p\_int nearests) {

swigfaissJNI.IndexHNSW\_init\_level\_0\_from\_entry\_points(swigCPtr, this, npt, SWIGTYPE\_p\_int.getCPtr(points), SWIGTYPE\_p\_int.getCPtr(nearests));

}

public void reorder\_links() {

swigfaissJNI.IndexHNSW\_reorder\_links(swigCPtr, this);

}

public void link\_singletons() {

swigfaissJNI.IndexHNSW\_link\_singletons(swigCPtr, this);

}

}