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

\* 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 IndexPQ extends IndexFlatCodes {

private transient long swigCPtr;

protected IndexPQ(long cPtr, boolean cMemoryOwn) {

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

swigCPtr = cPtr;

}

protected static long getCPtr(IndexPQ 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\_IndexPQ(swigCPtr);

}

swigCPtr = 0;

}

super.delete();

}

public void setPq(ProductQuantizer value) {

swigfaissJNI.IndexPQ\_pq\_set(swigCPtr, this, ProductQuantizer.getCPtr(value), value);

}

public ProductQuantizer getPq() {

long cPtr = swigfaissJNI.IndexPQ\_pq\_get(swigCPtr, this);

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

}

public IndexPQ(int d, long M, long nbits, MetricType metric) {

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

}

public IndexPQ(int d, long M, long nbits) {

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

}

public IndexPQ() {

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

}

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

swigfaissJNI.IndexPQ\_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.IndexPQ\_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 sa\_encode(long n, SWIGTYPE\_p\_float x, SWIGTYPE\_p\_unsigned\_char bytes) {

swigfaissJNI.IndexPQ\_sa\_encode(swigCPtr, this, n, SWIGTYPE\_p\_float.getCPtr(x), SWIGTYPE\_p\_unsigned\_char.getCPtr(bytes));

}

public void sa\_decode(long n, SWIGTYPE\_p\_unsigned\_char bytes, SWIGTYPE\_p\_float x) {

swigfaissJNI.IndexPQ\_sa\_decode(swigCPtr, this, n, SWIGTYPE\_p\_unsigned\_char.getCPtr(bytes), SWIGTYPE\_p\_float.getCPtr(x));

}

public DistanceComputer get\_distance\_computer() {

long cPtr = swigfaissJNI.IndexPQ\_get\_distance\_computer(swigCPtr, this);

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

}

public void setDo\_polysemous\_training(boolean value) {

swigfaissJNI.IndexPQ\_do\_polysemous\_training\_set(swigCPtr, this, value);

}

public boolean getDo\_polysemous\_training() {

return swigfaissJNI.IndexPQ\_do\_polysemous\_training\_get(swigCPtr, this);

}

public void setPolysemous\_training(PolysemousTraining value) {

swigfaissJNI.IndexPQ\_polysemous\_training\_set(swigCPtr, this, PolysemousTraining.getCPtr(value), value);

}

public PolysemousTraining getPolysemous\_training() {

long cPtr = swigfaissJNI.IndexPQ\_polysemous\_training\_get(swigCPtr, this);

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

}

public void setSearch\_type(IndexPQ.Search\_type\_t value) {

swigfaissJNI.IndexPQ\_search\_type\_set(swigCPtr, this, value.swigValue());

}

public IndexPQ.Search\_type\_t getSearch\_type() {

return IndexPQ.Search\_type\_t.swigToEnum(swigfaissJNI.IndexPQ\_search\_type\_get(swigCPtr, this));

}

public void setEncode\_signs(boolean value) {

swigfaissJNI.IndexPQ\_encode\_signs\_set(swigCPtr, this, value);

}

public boolean getEncode\_signs() {

return swigfaissJNI.IndexPQ\_encode\_signs\_get(swigCPtr, this);

}

public void setPolysemous\_ht(int value) {

swigfaissJNI.IndexPQ\_polysemous\_ht\_set(swigCPtr, this, value);

}

public int getPolysemous\_ht() {

return swigfaissJNI.IndexPQ\_polysemous\_ht\_get(swigCPtr, this);

}

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

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

}

public void hamming\_distance\_histogram(long n, SWIGTYPE\_p\_float x, long nb, SWIGTYPE\_p\_float xb, LongVector dist\_histogram) {

swigfaissJNI.IndexPQ\_hamming\_distance\_histogram(swigCPtr, this, n, SWIGTYPE\_p\_float.getCPtr(x), nb, SWIGTYPE\_p\_float.getCPtr(xb), SWIGTYPE\_p\_long\_long.getCPtr(dist\_histogram.data()), dist\_histogram);

}

public void hamming\_distance\_table(long n, SWIGTYPE\_p\_float x, SWIGTYPE\_p\_int dis) {

swigfaissJNI.IndexPQ\_hamming\_distance\_table(swigCPtr, this, n, SWIGTYPE\_p\_float.getCPtr(x), SWIGTYPE\_p\_int.getCPtr(dis));

}

public final static class Search\_type\_t {

public final static IndexPQ.Search\_type\_t ST\_PQ = new IndexPQ.Search\_type\_t("ST\_PQ");

public final static IndexPQ.Search\_type\_t ST\_HE = new IndexPQ.Search\_type\_t("ST\_HE");

public final static IndexPQ.Search\_type\_t ST\_generalized\_HE = new IndexPQ.Search\_type\_t("ST\_generalized\_HE");

public final static IndexPQ.Search\_type\_t ST\_SDC = new IndexPQ.Search\_type\_t("ST\_SDC");

public final static IndexPQ.Search\_type\_t ST\_polysemous = new IndexPQ.Search\_type\_t("ST\_polysemous");

public final static IndexPQ.Search\_type\_t ST\_polysemous\_generalize = new IndexPQ.Search\_type\_t("ST\_polysemous\_generalize");

public final int swigValue() {

return swigValue;

}

public String toString() {

return swigName;

}

public static Search\_type\_t swigToEnum(int swigValue) {

if (swigValue < swigValues.length && swigValue >= 0 && swigValues[swigValue].swigValue == swigValue)

return swigValues[swigValue];

for (int i = 0; i < swigValues.length; i++)

if (swigValues[i].swigValue == swigValue)

return swigValues[i];

throw new IllegalArgumentException("No enum " + Search\_type\_t.class + " with value " + swigValue);

}

private Search\_type\_t(String swigName) {

this.swigName = swigName;

this.swigValue = swigNext++;

}

private Search\_type\_t(String swigName, int swigValue) {

this.swigName = swigName;

this.swigValue = swigValue;

swigNext = swigValue+1;

}

private Search\_type\_t(String swigName, Search\_type\_t swigEnum) {

this.swigName = swigName;

this.swigValue = swigEnum.swigValue;

swigNext = this.swigValue+1;

}

private static Search\_type\_t[] swigValues = { ST\_PQ, ST\_HE, ST\_generalized\_HE, ST\_SDC, ST\_polysemous, ST\_polysemous\_generalize };

private static int swigNext = 0;

private final int swigValue;

private final String swigName;

}

}