// Protocol messages for describing features for machine learning model

// training or inference.

//

// There are three base Feature types:

// - bytes

// - float

// - int64

//

// A Feature contains Lists which may hold zero or more values. These

// lists are the base values BytesList, FloatList, Int64List.

//

// Features are organized into categories by name. The Features message

// contains the mapping from name to Feature.

//

// Example Features for a movie recommendation application:

// feature {

// key: "age"

// value { float\_list {

// value: 29.0

// }}

// }

// feature {

// key: "movie"

// value { bytes\_list {

// value: "The Shawshank Redemption"

// value: "Fight Club"

// }}

// }

// feature {

// key: "movie\_ratings"

// value { float\_list {

// value: 9.0

// value: 9.7

// }}

// }

// feature {

// key: "suggestion"

// value { bytes\_list {

// value: "Inception"

// }}

// }

// feature {

// key: "suggestion\_purchased"

// value { int64\_list {

// value: 1

// }}

// }

// feature {

// key: "purchase\_price"

// value { float\_list {

// value: 9.99

// }}

// }

//

syntax = "proto3";

package tensorflow;

option cc\_enable\_arenas = true;

option java\_outer\_classname = "FeatureProtos";

option java\_multiple\_files = true;

option java\_package = "org.tensorflow.example";

option go\_package = "github.com/tensorflow/tensorflow/tensorflow/go/core/example";

// LINT.IfChange

// Containers to hold repeated fundamental values.

message BytesList {

repeated bytes value = 1;

}

message FloatList {

repeated float value = 1 [packed = true];

}

message Int64List {

repeated int64 value = 1 [packed = true];

}

// Containers for non-sequential data.

message Feature {

// Each feature can be exactly one kind.

oneof kind {

BytesList bytes\_list = 1;

FloatList float\_list = 2;

Int64List int64\_list = 3;

}

}

message Features {

// Map from feature name to feature.

map<string, Feature> feature = 1;

}

// Containers for sequential data.

//

// A FeatureList contains lists of Features. These may hold zero or more

// Feature values.

//

// FeatureLists are organized into categories by name. The FeatureLists message

// contains the mapping from name to FeatureList.

//

message FeatureList {

repeated Feature feature = 1;

}

message FeatureLists {

// Map from feature name to feature list.

map<string, FeatureList> feature\_list = 1;

}

// LINT.ThenChange(

// https://www.tensorflow.org/code/tensorflow/python/training/training.py)