**Projeto: Guava**

**Confiança Mínima: 0%**

1. **Erro sem estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Map$Entry.getKey()

**Também chamam:**

java.util.Iterator.next()

Suporte: 0.000909 (6)

Confiança: 0.03351

Contagem: 9

**Método Minerado:**

@Override **protected** C ColumnKeyIterator.computeNext() {

**while** (**true**) {

**if** (entryIterator.hasNext()) {

Entry<C, V> entry = entryIterator.next();

**if** (!seen.containsKey(entry.getKey())) {

seen.put(entry.getKey(), entry.getValue());

**return** entry.getKey();

}

} **else** **if** (mapIterator.hasNext()) {

entryIterator = mapIterator.next().entrySet().iterator();

} **else** {

**return** endOfData();

}

}

}

**Padrão não sendo utilizado:**

**public** Builder<K, V> put(Range<K> range, V value) {

checkNotNull(range);

checkNotNull(value);

**if** (!keyRanges.complement().encloses(range)) {

// it's an error case; we can afford an expensive lookup

**for** (Entry<Range<K>, V> entry : rangeMap.asMapOfRanges().entrySet()) {

Range<K> key = entry.getKey();

**if** (key.isConnected(range) && !key.intersection(range).isEmpty()) {

**throw** **new** IllegalArgumentException(

"Overlapping ranges: range " + range + " overlaps with entry " + entry);

}

}

}

**if** (range.isEmpty()) {

**return** **this**;

}

keyRanges.add(range);

rangeMap.put(range, value);

**return** **this**;

}

1. **Erro sem estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Map$Entry.getValue()

**Também chamam:**

java.util.Map.entrySet()

Suporte: 0.000909 (6)

Confiança: 0.03141

Contagem: 106

**Método Minerado:**

@Override **protected** C ColumnKeyIterator.computeNext() {

**while** (**true**) {

**if** (entryIterator.hasNext()) {

Entry<C, V> entry = entryIterator.next();

**if** (!seen.containsKey(entry.getKey())) {

seen.put(entry.getKey(), entry.getValue());

**return** entry.getKey();

}

} **else** **if** (mapIterator.hasNext()) {

entryIterator = mapIterator.next().entrySet().iterator();

} **else** {

**return** endOfData();

}

}

}

**Padrão não sendo utilizado:**

**public** Builder<K, V> putAll(RangeMap<K, ? **extends** V> rangeMap) {

**for** (Entry<Range<K>, ? **extends** V> entry : rangeMap.asMapOfRanges().entrySet()) {

put(entry.getKey(), entry.getValue());

}

**return** **this**;

}

1. **Automatizado sem estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Map$Entry.getValue()

**Também chamam:**

java.util.Map.entrySet()

Suporte: 0.000909 (6)

Confiança: 0.03141

Contagem: 6

**Método Minerado:**

@Override **protected** C ColumnKeyIterator.computeNext() {

**while** (**true**) {

**if** (entryIterator.hasNext()) {

Entry<C, V> entry = entryIterator.next();

**if** (!seen.containsKey(entry.getKey())) {

seen.put(entry.getKey(), entry.getValue());

**return** entry.getKey();

}

} **else** **if** (mapIterator.hasNext()) {

entryIterator = mapIterator.next().entrySet().iterator();

} **else** {

**return** endOfData();

}

}

}

**Padrão sendo utilizado:**

RegularImmutableTable.SparseImmutableTable(ImmutableList<Cell<R, C, V>> cellList,

ImmutableSet<R> rowSpace, ImmutableSet<C> columnSpace) {

Map<R, Integer> rowIndex = Maps.newHashMap();

Map<R, Map<C, V>> rows = Maps.newLinkedHashMap();

**for** (R row : rowSpace) {

rowIndex.put(row, rows.size());

rows.put(row, **new** LinkedHashMap<C, V>());

}

Map<C, Map<R, V>> columns = Maps.newLinkedHashMap();

**for** (C col : columnSpace) {

columns.put(col, **new** LinkedHashMap<R, V>());

}

**int**[] iterationOrderRow = **new** **int**[cellList.size()];

**int**[] iterationOrderColumn = **new** **int**[cellList.size()];

**for** (**int** i = 0; i < cellList.size(); i++) {

Cell<R, C, V> cell = cellList.get(i);

R rowKey = cell.getRowKey();

C columnKey = cell.getColumnKey();

V value = cell.getValue();

iterationOrderRow[i] = rowIndex.get(rowKey);

Map<C, V> thisRow = rows.get(rowKey);

iterationOrderColumn[i] = thisRow.size();

V oldValue = thisRow.put(columnKey, value);

**if** (oldValue != **null**) {

**throw** **new** IllegalArgumentException("Duplicate value for row=" + rowKey + ", column="

+ columnKey + ": " + value + ", " + oldValue);

}

columns.get(columnKey).put(rowKey, value);

}

**this**.iterationOrderRow = iterationOrderRow;

**this**.iterationOrderColumn = iterationOrderColumn;

ImmutableMap.Builder<R, Map<C, V>> rowBuilder = ImmutableMap.builder();

**for** (Map.Entry<R, Map<C, V>> row : rows.entrySet()) {

rowBuilder.put(row.getKey(), ImmutableMap.copyOf(row.getValue()));

}

**this**.rowMap = rowBuilder.build();

ImmutableMap.Builder<C, Map<R, V>> columnBuilder = ImmutableMap.builder();

**for** (Map.Entry<C, Map<R, V>> col : columns.entrySet()) {

columnBuilder.put(col.getKey(), ImmutableMap.copyOf(col.getValue()));

}

**this**.columnMap = columnBuilder.build();

}

1. **Erro sem estruturas de controle**

**Padrão:**

**Usuários que chamam:**

Table$Cell.getRowKey()

**Também chamam:**

Table$Cell.getRowKey()

Suporte: 0.000909 (6)

Confiança: 0.249

Contagem: 8

**Método Minerado:**

**public** Builder<R, C, V> put(Cell<? **extends** R, ? **extends** C, ? **extends** V> cell) {

**if** (cell **instanceof** Tables.ImmutableCell) {

*checkNotNull*(cell.getRowKey());

*checkNotNull*(cell.getColumnKey());

*checkNotNull*(cell.getValue());

@SuppressWarnings("unchecked") // all supported methods are covariant

Cell<R, C, V> immutableCell = (Cell<R, C, V>) cell;

cells.add(immutableCell);

} **else** {

put(cell.getRowKey(), cell.getColumnKey(), cell.getValue());

}

**return** **this**;

}

**Padrão não sendo utilizado:**

RegularImmutableTable.SparseImmutableTable(ImmutableList<Cell<R, C, V>> cellList,

ImmutableSet<R> rowSpace, ImmutableSet<C> columnSpace) {

Map<R, Integer> rowIndex = Maps.newHashMap();

Map<R, Map<C, V>> rows = Maps.newLinkedHashMap();

**for** (R row : rowSpace) {

rowIndex.put(row, rows.size());

rows.put(row, **new** LinkedHashMap<C, V>());

}

Map<C, Map<R, V>> columns = Maps.newLinkedHashMap();

**for** (C col : columnSpace) {

columns.put(col, **new** LinkedHashMap<R, V>());

}

**int**[] iterationOrderRow = **new** **int**[cellList.size()];

**int**[] iterationOrderColumn = **new** **int**[cellList.size()];

**for** (**int** i = 0; i < cellList.size(); i++) {

Cell<R, C, V> cell = cellList.get(i);

R rowKey = cell.getRowKey();

C columnKey = cell.getColumnKey();

V value = cell.getValue();

iterationOrderRow[i] = rowIndex.get(rowKey);

Map<C, V> thisRow = rows.get(rowKey);

iterationOrderColumn[i] = thisRow.size();

V oldValue = thisRow.put(columnKey, value);

**if** (oldValue != **null**) {

**throw** **new** IllegalArgumentException("Duplicate value for row=" + rowKey + ", column="

+ columnKey + ": " + value + ", " + oldValue);

}

columns.get(columnKey).put(rowKey, value);

}

**this**.iterationOrderRow = iterationOrderRow;

**this**.iterationOrderColumn = iterationOrderColumn;

ImmutableMap.Builder<R, Map<C, V>> rowBuilder = ImmutableMap.builder();

**for** (Map.Entry<R, Map<C, V>> row : rows.entrySet()) {

rowBuilder.put(row.getKey(), ImmutableMap.copyOf(row.getValue()));

}

**this**.rowMap = rowBuilder.build();

ImmutableMap.Builder<C, Map<R, V>> columnBuilder = ImmutableMap.builder();

**for** (Map.Entry<C, Map<R, V>> col : columns.entrySet()) {

columnBuilder.put(col.getKey(), ImmutableMap.copyOf(col.getValue()));

}

**this**.columnMap = columnBuilder.build();

}

1. **Erro sem estruturas de controle**

**Padrão:**

**Usuários que chamam:**

AbstractFuture.setException(java.lang.Throwable)

**Também chamam:**

AbstractFuture.setException(java.lang.Throwable)

Suporte: 0.0009909 (6)

Confiança: 0.75%

Contagem: 1

**Método Minerado:**

**public** **void** failed(State from, Throwable failure) {

**switch** (from) {

**case** *STARTING*:

startup.setException(failure);

shutdown.setException(**new** Exception("Service failed to start.", failure));

**break**;

**case** *RUNNING*:

shutdown.setException(**new** Exception("Service failed while running", failure));

**break**;

**case** *STOPPING*:

shutdown.setException(failure);

**break**;

**case** *TERMINATED*: /\* fall-through \*/

**case** *FAILED*: /\* fall-through \*/

**case** *NEW*: /\* fall-through \*/

**default**:

**throw** **new** AssertionError("Unexpected from state: " + from);

}

}

**Padrão não sendo utilizado:**

**public** **void** MoreExecutors$ScheduledListeningDecorator$NeverSuccessfulListenableFutureTask.run() {

**try** {

delegate.run();

} **catch** (Throwable t) {

setException(t);

**throw** Throwables.propagate(t);

}

}

1. **Erro sem estruturas de controle**

**Padrão:**

**Usuários que chamam:**

TypeVariable.getBounds()

**Também chamam:**

WildcardType.getUpperBounds()

Suporte: 0.000909 (6)

Confiança: 0.75

Contagem: 3

**Método Minerado:**

**static** Type getComponentType(Type type) {

*checkNotNull*(type);

**if** (type **instanceof** Class) {

**return** ((Class<?>) type).getComponentType();

} **else** **if** (type **instanceof** GenericArrayType) {

**return** ((GenericArrayType) type).getGenericComponentType();

} **else** **if** (type **instanceof** WildcardType) {

**return** *subtypeOfComponentType*(((WildcardType) type).getUpperBounds());

} **else** **if** (type **instanceof** TypeVariable) {

**return** *subtypeOfComponentType*(((TypeVariable<?>) type).getBounds());

} **else** {

**return** **null**;

}

}

**private** **void** introspect(Type type) {

**if** (!introspectedTypes.add(type)) {

**return**;

}

**if** (type **instanceof** ParameterizedType) {

introspectParameterizedType((ParameterizedType) type);

} **else** **if** (type **instanceof** Class) {

introspectClass((Class<?>) type);

} **else** **if** (type **instanceof** TypeVariable) {

**for** (Type bound : ((TypeVariable<?>) type).getBounds()) {

introspect(bound);

}

} **else** **if** (type **instanceof** WildcardType) {

**for** (Type bound : ((WildcardType) type).getUpperBounds()) {

introspect(bound);

}

}

}

**Padrão não sendo utilizado:**

Type resolveTypeVariable(TypeVariable<?> var, TypeResolver guardedResolver) {

checkNotNull(guardedResolver);

Type type = map.get(var);

**if** (type == **null**) {

Type[] bounds = var.getBounds();

**if** (bounds.length == 0) {

**return** var;

}

**return** Types.newTypeVariable(

var.getGenericDeclaration(),

var.getName(),

guardedResolver.resolveTypes(bounds));

}

// in case the type is yet another type variable.

**return** guardedResolver.resolveType(type);

}

**Confiança Mínima: 20%**

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Iterator.next()

**Também chamam:**

com.google.common.collect.Multiset.contains(java.lang.Object)

Suporte: 0.000909 (6)

Confiança: 20%

Contagem: 23

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

**public** **void** testAsMapEntriesUpdate() {

multimap.put("foo", 1);

multimap.put("foo", 3);

Collection<Entry<String, Collection<Integer>>> entries =

multimap.asMap().entrySet();

Entry<String, Collection<Integer>> entry = entries.iterator().next();

Collection<Integer> values = entry.getValue();

multimap.put("foo", 5);

assertEquals(3, values.size());

assertTrue(values.contains(5));

values.add(7);

assertSize(4);

assertTrue(multimap.containsValue(7));

multimap.put("bar", 4);

assertEquals(2, entries.size());

assertSize(5);

assertTrue(entries.remove(entry));

assertSize(1);

assertFalse(multimap.containsKey("foo"));

assertTrue(multimap.containsKey("bar"));

assertFalse(entries.remove("foo"));

assertFalse(entries.remove(

Maps.immutableEntry("foo", Collections.singleton(2))));

assertSize(1);

Iterator<Entry<String, Collection<Integer>>> iterator =

entries.iterator();

assertTrue(iterator.hasNext());

iterator.next();

iterator.remove();

assertFalse(iterator.hasNext());

assertSize(0);

assertTrue(multimap.isEmpty());

multimap.put("bar", 8);

assertSize(1);

entries.clear();

assertSize(0);

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Iterator.next()

**Também chamam:**

com.google.common.collect.Multiset$Entry.getElement()

Suporte: 0.000909 (6)

Confiança: 20%

Contagem: 16

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

**public** **void** testAsMapEntriesUpdate() {

multimap.put("foo", 1);

multimap.put("foo", 3);

Collection<Entry<String, Collection<Integer>>> entries =

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multimap.put("bar", 4);

assertEquals(2, entries.size());

assertSize(5);

assertTrue(entries.remove(entry));

assertSize(1);

assertFalse(multimap.containsKey("foo"));

assertTrue(multimap.containsKey("bar"));

assertFalse(entries.remove("foo"));

assertFalse(entries.remove(

Maps.immutableEntry("foo", Collections.singleton(2))));

assertSize(1);

Iterator<Entry<String, Collection<Integer>>> iterator =

entries.iterator();

assertTrue(iterator.hasNext());

iterator.next();

iterator.remove();

assertFalse(iterator.hasNext());

assertSize(0);

assertTrue(multimap.isEmpty());

multimap.put("bar", 8);

assertSize(1);

entries.clear();

assertSize(0);

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Iterator.next()

**Também chamam:** com.google.common.collect.Multisets.immutableEntry(com.google.common.collect.Multisets$(Lcom/google/common/collect/Multiset;Lcom/google/common/collect/Multiset;)Lcom/google/common/collect/Multiset;$E, I)

Suporte: 0.000909 (6)

Confiança: 20%

Contagem: 21

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

**public** **void** testAsMapEntriesUpdate() {

multimap.put("foo", 1);

multimap.put("foo", 3);

Collection<Entry<String, Collection<Integer>>> entries =

multimap.asMap().entrySet();

Entry<String, Collection<Integer>> entry = entries.iterator().next();

Collection<Integer> values = entry.getValue();

multimap.put("foo", 5);

assertEquals(3, values.size());

assertTrue(values.contains(5));

values.add(7);

assertSize(4);

assertTrue(multimap.containsValue(7));

multimap.put("bar", 4);

assertEquals(2, entries.size());

assertSize(5);

assertTrue(entries.remove(entry));

assertSize(1);

assertFalse(multimap.containsKey("foo"));

assertTrue(multimap.containsKey("bar"));

assertFalse(entries.remove("foo"));

assertFalse(entries.remove(

Maps.immutableEntry("foo", Collections.singleton(2))));

assertSize(1);

Iterator<Entry<String, Collection<Integer>>> iterator =

entries.iterator();

assertTrue(iterator.hasNext());

iterator.next();

iterator.remove();

assertFalse(iterator.hasNext());

assertSize(0);

assertTrue(multimap.isEmpty());

multimap.put("bar", 8);

assertSize(1);

entries.clear();

assertSize(0);

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Iterator.next()

**Também chamam:**

com.google.common.collect.Multiset$Entry.getCount()

Suporte: 0.000909 (6)

Confiança: 20%

Contagem: 16

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

**public** **void** testAsMapEntriesUpdate() {

multimap.put("foo", 1);

multimap.put("foo", 3);

Collection<Entry<String, Collection<Integer>>> entries =

multimap.asMap().entrySet();

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Collection<Integer> values = entry.getValue();

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assertSize(5);

assertTrue(entries.remove(entry));

assertSize(1);

assertFalse(multimap.containsKey("foo"));

assertTrue(multimap.containsKey("bar"));

assertFalse(entries.remove("foo"));

assertFalse(entries.remove(

Maps.immutableEntry("foo", Collections.singleton(2))));

assertSize(1);

Iterator<Entry<String, Collection<Integer>>> iterator =

entries.iterator();

assertTrue(iterator.hasNext());

iterator.next();

iterator.remove();

assertFalse(iterator.hasNext());

assertSize(0);

assertTrue(multimap.isEmpty());

multimap.put("bar", 8);

assertSize(1);

entries.clear();

assertSize(0);

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Iterator.hasNext()

**Também chamam:**

com.google.common.collect.Multiset.contains(java.lang.Object)

Suporte: 0.000909 (6)

Confiança: 21,42%

Contagem: 7

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

**public** **void** testAsMapEntriesUpdate() {

multimap.put("foo", 1);

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assertSize(1);

Iterator<Entry<String, Collection<Integer>>> iterator =

entries.iterator();

assertTrue(iterator.hasNext());

iterator.next();

iterator.remove();

assertFalse(iterator.hasNext());

assertSize(0);

assertTrue(multimap.isEmpty());

multimap.put("bar", 8);

assertSize(1);

entries.clear();

assertSize(0);

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Iterator.hasNext()

**Também chamam:**

com.google.common.collect.Multiset$Entry.getElement()

Suporte: 0.000909 (6)

Confiança: 20%

Contagem: 6

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

**public** **void** testAsMapEntriesUpdate() {

multimap.put("foo", 1);

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Collection<Entry<String, Collection<Integer>>> entries =

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values.add(7);

assertSize(4);

assertTrue(multimap.containsValue(7));

multimap.put("bar", 4);

assertEquals(2, entries.size());

assertSize(5);

assertTrue(entries.remove(entry));

assertSize(1);

assertFalse(multimap.containsKey("foo"));

assertTrue(multimap.containsKey("bar"));

assertFalse(entries.remove("foo"));

assertFalse(entries.remove(

Maps.immutableEntry("foo", Collections.singleton(2))));

assertSize(1);

Iterator<Entry<String, Collection<Integer>>> iterator =

entries.iterator();

assertTrue(iterator.hasNext());

iterator.next();

iterator.remove();

assertFalse(iterator.hasNext());

assertSize(0);

assertTrue(multimap.isEmpty());

multimap.put("bar", 8);

assertSize(1);

entries.clear();

assertSize(0);

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Iterator.hasNext()

**Também chamam:** com.google.common.collect.Multisets.immutableEntry(com.google.common.collect.Multisets$(Lcom/google/common/collect/Multiset;Lcom/google/common/collect/Multiset;)Lcom/google/common/collect/Multiset;$E, I)

Suporte: 0.000909 (6)

Confiança: 20%

Contagem: 7

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

**public** **void** testAsMapEntriesUpdate() {

multimap.put("foo", 1);

multimap.put("foo", 3);

Collection<Entry<String, Collection<Integer>>> entries =

multimap.asMap().entrySet();

Entry<String, Collection<Integer>> entry = entries.iterator().next();

Collection<Integer> values = entry.getValue();

multimap.put("foo", 5);

assertEquals(3, values.size());

assertTrue(values.contains(5));

values.add(7);

assertSize(4);

assertTrue(multimap.containsValue(7));

multimap.put("bar", 4);

assertEquals(2, entries.size());

assertSize(5);

assertTrue(entries.remove(entry));

assertSize(1);

assertFalse(multimap.containsKey("foo"));

assertTrue(multimap.containsKey("bar"));

assertFalse(entries.remove("foo"));

assertFalse(entries.remove(

Maps.immutableEntry("foo", Collections.singleton(2))));

assertSize(1);

Iterator<Entry<String, Collection<Integer>>> iterator =

entries.iterator();

assertTrue(iterator.hasNext());

iterator.next();

iterator.remove();

assertFalse(iterator.hasNext());

assertSize(0);

assertTrue(multimap.isEmpty());

multimap.put("bar", 8);

assertSize(1);

entries.clear();

assertSize(0);

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Iterator.hasNext()

**Também chamam:**

com.google.common.collect.Multiset$Entry.getCount()

Suporte: 0.000909 (6)

Confiança: 20%

Contagem: 6

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

**public** **void** testAsMapEntriesUpdate() {

multimap.put("foo", 1);

multimap.put("foo", 3);

Collection<Entry<String, Collection<Integer>>> entries =

multimap.asMap().entrySet();

Entry<String, Collection<Integer>> entry = entries.iterator().next();

Collection<Integer> values = entry.getValue();

multimap.put("foo", 5);

assertEquals(3, values.size());

assertTrue(values.contains(5));

values.add(7);

assertSize(4);

assertTrue(multimap.containsValue(7));

multimap.put("bar", 4);

assertEquals(2, entries.size());

assertSize(5);

assertTrue(entries.remove(entry));

assertSize(1);

assertFalse(multimap.containsKey("foo"));

assertTrue(multimap.containsKey("bar"));

assertFalse(entries.remove("foo"));

assertFalse(entries.remove(

Maps.immutableEntry("foo", Collections.singleton(2))));

assertSize(1);

Iterator<Entry<String, Collection<Integer>>> iterator =

entries.iterator();

assertTrue(iterator.hasNext());

iterator.next();

iterator.remove();

assertFalse(iterator.hasNext());

assertSize(0);

assertTrue(multimap.isEmpty());

multimap.put("bar", 8);

assertSize(1);

entries.clear();

assertSize(0);

}

1. **Automatizado com estruturas de controle (Influência supersequência – if then else)**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Iterator.next()

**Também chamam:**

com.google.common.collect.Multiset.contains(java.lang.Object)

Suporte: 0.000909 (6)

Confiança: 20%

Contagem: 1

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão sendo utilizado:**

**public** **void** testIteratorRemove() {

ms.add("a");

ms.add("b");

ms.add("c");

Iterator<String> iterator = ms.iterator();

String element1 = iterator.next();

iterator.remove();

String element2 = iterator.next();

assertFalse(ms.contains(element1));

assertTrue(ms.contains(element2));

assertSize();

}

**Confiança Mínima: 30%**

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.hasNext()

java.util.Iterator.next()

java.util.Iterator.hasNext()

java.util.Iterator.next()

**Também chamam:**

com.google.common.collect.Multiset.contains(java.lang.Object)

Suporte: 0.000909 (6)

Confiança: 35%

Contagem: 14

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

NavigableSet<K> createKeySet() {

**return** **new** NavigableKeySet<K, V>(**this**) {

@Override

**public** **boolean** removeAll(Collection<?> c) {

**boolean** changed = **false**;

Iterator<Entry<K, V>> entryIterator = sortedMap().entrySet().iterator();

**while** (entryIterator.hasNext()) {

Entry<K, V> entry = entryIterator.next();

**if** (c.contains(entry.getKey()) && predicate.apply(entry)) {

entryIterator.remove();

changed = **true**;

}

}

**return** changed;

}

@Override

**public** **boolean** retainAll(Collection<?> c) {

**boolean** changed = **false**;

Iterator<Entry<K, V>> entryIterator = sortedMap().entrySet().iterator();

**while** (entryIterator.hasNext()) {

Entry<K, V> entry = entryIterator.next();

**if** (!c.contains(entry.getKey()) && predicate.apply(entry)) {

entryIterator.remove();

changed = **true**;

}

}

**return** changed;

}

};

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.hasNext()

java.util.Iterator.next()

java.util.Iterator.hasNext()

java.util.Iterator.next()

**Também chamam:**

com.google.common.collect.Multiset$Entry.getElement()

Suporte: 0.000909 (6)

Confiança: 35%

Contagem: 14

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

NavigableSet<K> createKeySet() {

**return** **new** NavigableKeySet<K, V>(**this**) {

@Override

**public** **boolean** removeAll(Collection<?> c) {

**boolean** changed = **false**;

Iterator<Entry<K, V>> entryIterator = sortedMap().entrySet().iterator();

**while** (entryIterator.hasNext()) {

Entry<K, V> entry = entryIterator.next();

**if** (c.contains(entry.getKey()) && predicate.apply(entry)) {

entryIterator.remove();

changed = **true**;

}

}

**return** changed;

}

@Override

**public** **boolean** retainAll(Collection<?> c) {

**boolean** changed = **false**;

Iterator<Entry<K, V>> entryIterator = sortedMap().entrySet().iterator();

**while** (entryIterator.hasNext()) {

Entry<K, V> entry = entryIterator.next();

**if** (!c.contains(entry.getKey()) && predicate.apply(entry)) {

entryIterator.remove();

changed = **true**;

}

}

**return** changed;

}

};

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.hasNext()

java.util.Iterator.next()

java.util.Iterator.hasNext()

java.util.Iterator.next()

**Também chamam:**

com.google.common.collect.Multisets.immutableEntry(com.google.common.collect.Multisets$(Lcom/google/common/collect/Multiset;Lcom/google/common/collect/Multiset;)Lcom/google/common/collect/Multiset;$E, I)

Suporte: 0.000909 (6)

Confiança: 35%

Contagem: 14

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

NavigableSet<K> createKeySet() {

**return** **new** NavigableKeySet<K, V>(**this**) {

@Override

**public** **boolean** removeAll(Collection<?> c) {

**boolean** changed = **false**;

Iterator<Entry<K, V>> entryIterator = sortedMap().entrySet().iterator();

**while** (entryIterator.hasNext()) {

Entry<K, V> entry = entryIterator.next();

**if** (c.contains(entry.getKey()) && predicate.apply(entry)) {

entryIterator.remove();

changed = **true**;

}

}

**return** changed;

}

@Override

**public** **boolean** retainAll(Collection<?> c) {

**boolean** changed = **false**;

Iterator<Entry<K, V>> entryIterator = sortedMap().entrySet().iterator();

**while** (entryIterator.hasNext()) {

Entry<K, V> entry = entryIterator.next();

**if** (!c.contains(entry.getKey()) && predicate.apply(entry)) {

entryIterator.remove();

changed = **true**;

}

}

**return** changed;

}

};

}

1. **Erro com estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.hasNext()

java.util.Iterator.next()

java.util.Iterator.hasNext()

java.util.Iterator.next()

**Também chamam:**

com.google.common.collect.Multiset$Entry.getCount()

Suporte: 0.000909 (6)

Confiança: 35%

Contagem: 14

**Método Minerado (Supersequência minerada):**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

NavigableSet<K> createKeySet() {

**return** **new** NavigableKeySet<K, V>(**this**) {

@Override

**public** **boolean** removeAll(Collection<?> c) {

**boolean** changed = **false**;

Iterator<Entry<K, V>> entryIterator = sortedMap().entrySet().iterator();

**while** (entryIterator.hasNext()) {

Entry<K, V> entry = entryIterator.next();

**if** (c.contains(entry.getKey()) && predicate.apply(entry)) {

entryIterator.remove();

changed = **true**;

}

}

**return** changed;

}

@Override

**public** **boolean** retainAll(Collection<?> c) {

**boolean** changed = **false**;

Iterator<Entry<K, V>> entryIterator = sortedMap().entrySet().iterator();

**while** (entryIterator.hasNext()) {

Entry<K, V> entry = entryIterator.next();

**if** (!c.contains(entry.getKey()) && predicate.apply(entry)) {

entryIterator.remove();

changed = **true**;

}

}

**return** changed;

}

};

}

**Confiança Mínima: 60%**

1. **Automatizado com estruturas de controle (Influência supersequência – if then else)**

**Padrão:**

**Usuários que chamam:**

java.lang.StringBuilder.append(java.lang.String)

java.lang.StringBuilder.append(java.lang.String)

**Também chamam:**

java.lang.StringBuilder.append(java.lang.String)

Suporte: 0.00165153 (10)

Confiança: 66%

Contagem: 3

**Método Minerado (Supersequência minerada):**

**private** **static** String hextetsToIPv6String(**int**[] hextets) {

/\*

\* While scanning the array, handle these state transitions:

\* start->num => "num" start->gap => "::"

\* num->num => ":num" num->gap => "::"

\* gap->num => "num" gap->gap => ""

\*/

StringBuilder buf = **new** StringBuilder(39);

**boolean** lastWasNumber = **false**;

**for** (**int** i = 0; i < hextets.length; i++) {

**boolean** thisIsNumber = hextets[i] >= 0;

**if** (thisIsNumber) {

**if** (lastWasNumber) {

buf.append(':');

}

buf.append(Integer.*toHexString*(hextets[i]));

} **else** {

**if** (i == 0 || lastWasNumber) {

buf.append("::");

}

}

lastWasNumber = thisIsNumber;

}

**return** buf.toString();

}

**Padrão sendo utilizado:**

**public** String StandardBaseEncoding.toString() {

StringBuilder builder = **new** StringBuilder("BaseEncoding.");

builder.append(alphabet.toString());

**if** (8 % alphabet.bitsPerChar != 0) {

**if** (paddingChar == **null**) {

builder.append(".omitPadding()");

} **else** {

builder.append(".withPadChar(").append(paddingChar).append(')');

}

}

**return** builder.toString();

}

**Confiança Mínima: 80%**

1. **Automatizado sem estruturas de controle (If then else)**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.hasNext()

java.util.Iterator.hasNext()

**Também chamam:**

java.util.Iterator.next()

Suporte: 0.004954 (30)

Confiança: 81,08%

Contagem: 16

**Método Minerado**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão sendo utilizado:**

@Override

**public** UnmodifiableIterator<C> iterator() {

**return** **new** AbstractIterator<C>() {

**final** Iterator<Range<C>> rangeItr = subRanges.iterator();

Iterator<C> elemItr = Iterators.emptyIterator();

@Override

**protected** C computeNext() {

**while** (!elemItr.hasNext()) {

**if** (rangeItr.hasNext()) {

elemItr = rangeItr.next().asSet(domain).iterator();

} **else** {

**return** endOfData();

}

}

**return** elemItr.next();

}

};

}

1. **Erro sem estruturas de controle**

**Padrão:**

**Usuários que chamam:**

java.util.Iterator.hasNext()

java.util.Iterator.hasNext()

**Também chamam:**

java.util.Iterator.next()

Suporte: 0.004954 (30)

Confiança: 81,08%

Contagem: 4

**Método Minerado**

**public** **static** **boolean** contains(Iterator<?> iterator, @Nullable Object element)

{

**if** (element == **null**) {

**while** (iterator.hasNext()) {

**if** (iterator.next() == **null**) {

**return** **true**;

}

}

} **else** {

**while** (iterator.hasNext()) {

**if** (element.equals(iterator.next())) {

**return** **true**;

}

}

}

**return** **false**;

}

**Padrão não sendo utilizado:**

**public** **void** testIteratorRemoveRepeated() {

ms.add("a", 3);

ms.add("b", 1);

ms.add("c", 2);

Iterator<String> iterator = ms.iterator();

**for** (**int** i = 0; i < 6; i++) {

assertTrue(iterator.hasNext());

iterator.next();

iterator.remove();

}

assertFalse(iterator.hasNext());

assertTrue(ms.isEmpty());

assertSize();

}

**Confiança Mínima: 90%**

1. **Erro com estruturas de controle**

**Usuários que chamam:**

java.util.Iterator.next()

java.util.Map.isEmpty()

**Também chamam:**

java.util.Iterator.remove()

Suporte: 0.000909 (6)

Confiança: 100%

Contagem: 1

**Método Minerado (Supersequência minerada):**

Range<C> floorRange(Cut<C> cut) {

// Ranges from the positive set that might border the complement range being requested.

Iterator<Range<C>> candidatePositiveRanges =

rangesByLowerCut.headMap(cut, **false**).descendingMap().values().iterator();

**if** (candidatePositiveRanges.hasNext()) {

Range<C> firstCandidate = candidatePositiveRanges.next();

// If cut is |, and firstRange is { }, then we only know { |

**if** (firstCandidate.upperBound.compareTo(cut) <= 0) {

// { } |

Cut<C> resultLowerBound = firstCandidate.upperBound;

Cut<C> resultUpperBound = Objects.*firstNonNull*(

rangesByLowerCut.higherKey(resultLowerBound), Cut.<C>*aboveAll*());

**return** Range.*create*(resultLowerBound, resultUpperBound);

} **else** **if** (candidatePositiveRanges.hasNext()) {

// } { | }

**return** Range.*create*(

candidatePositiveRanges.next().upperBound, firstCandidate.lowerBound);

} **else** **if** (Cut.*belowAll*().equals(firstCandidate.lowerBound)) {

**return** **null**;

} **else** {

**return** Range.*create*(Cut.<C>*belowAll*(), firstCandidate.lowerBound);

}

} **else** **if** (rangesByLowerCut.isEmpty()) {

**return** Range.*all*();

} **else** {

**return** Range.*create*(Cut.<C>*belowAll*(), rangesByLowerCut.firstKey());

}

}

**Padrão não sendo utilizado:**

**public** **void** testBiMapEntrySetIteratorRemove() {

BiMap<Integer, String> map = HashBiMap.create();

map.put(1, "one");

Set<Map.Entry<Integer, String>> entries = map.entrySet();

Iterator<Map.Entry<Integer, String>> iterator = entries.iterator();

Map.Entry<Integer, String> entry = iterator.next();

entry.setValue("two"); // changes the iterator's current entry value

assertEquals("two", map.get(1));

assertEquals(Integer.valueOf(1), map.inverse().get("two"));

iterator.remove(); // removes the updated entry

assertTrue(map.isEmpty());

}