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016 \*/  
017package org.apache.commons.collections4.functors;  
018  
019import java.io.Serializable;  
020  
021import org.apache.commons.collections4.Predicate;  
022  
023/\*\*  
024 \* Predicate implementation that returns the opposite of the decorated predicate.  
025 \*  
026 \* @since 3.0  
027 \*/  
028public final class NotPredicate<T> implements PredicateDecorator<T>, Serializable {  
029  
030 /\*\* Serial version UID \*/  
031 private static final long serialVersionUID = -2654603322338049674L;  
032  
033 /\*\* The predicate to decorate \*/  
034 private final Predicate<? super T> iPredicate;  
035  
036 /\*\*  
037 \* Factory to create the not predicate.  
038 \*  
039 \* @param <T> the type that the predicate queries  
040 \* @param predicate the predicate to decorate, not null  
041 \* @return the predicate  
042 \* @throws NullPointerException if the predicate is null  
043 \*/  
044 public static <T> Predicate<T> notPredicate(final Predicate<? super T> predicate) {  
045 if (predicate == null) {  
046 throw new NullPointerException("Predicate must not be null");  
047 }  
048 return new NotPredicate<>(predicate);  
049 }  
050  
051 /\*\*  
052 \* Constructor that performs no validation.  
053 \* Use <code>notPredicate</code> if you want that.  
054 \*  
055 \* @param predicate the predicate to call after the null check  
056 \*/  
057 public NotPredicate(final Predicate<? super T> predicate) {  
058 super();  
059 iPredicate = predicate;  
060 }  
061  
062 /\*\*  
063 \* Evaluates the predicate returning the opposite to the stored predicate.  
064 \*  
065 \* @param object the input object  
066 \* @return true if predicate returns false  
067 \*/  
068 @Override  
069 public boolean evaluate(final T object) {  
070 return !iPredicate.evaluate(object);  
071 }  
072  
073 /\*\*  
074 \* Gets the predicate being decorated.  
075 \*  
076 \* @return the predicate as the only element in an array  
077 \* @since 3.1  
078 \*/  
079 @Override  
080 @SuppressWarnings("unchecked")  
081 public Predicate<? super T>[] getPredicates() {  
082 return new Predicate[] {iPredicate};  
083 }  
084  
085}