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Assignment 1

Dry part 1

1)

The lines are:

```
if (index >= _suggestions.length) {  
    // generate 10 more and add them to the  
    // suggestions list.  
    _suggestions.addAll(generateWordPairs().take(10));  
}
```

assuming that `_suggestions` start with non-empty list of 10 word-pairs, if we remove these line we will get range error (index is invalid for accessing `_suggestion[index]`) while scrolling down beyond the 10 word-pairs in `_suggestion`.

This error will occur because at the next line the program is trying to get `_suggestions[index]` which is outside of `_suggestion` range (the deleted lines are supposed to add word-pairs for enlarging `_suggestion` range before accessing `_suggestion` with out-of-range indexes).

2)

A different method to construct with dividers (assuming the list is finite with 100 items from start) is using `ListView.Separated` which must take `itemCount` as a parameter.

It creates a fixed-length scrollable linear array of list "items" separated by list items "seperators".

`ListView.Separated` is better because the list is finite (and relatively small), hence it's better to create a fixed array instead of calling the builder only for those that are visible as `ListView.builder` does. This way the system doesn't have to allocate memory during run time and can avoid fragmentation for improving performance. In addition, this method creates the separators in contrast `ListView.builder`.

3)

`SetState` notifies the framework that the internal state of this object has changed, taping on word-pair should notify the app that the user wants to save\remove this word-pair at favorites. The user should see the UI changes for this action, so `SetState` is called.

Dry part 2

1)

MaterialApp provides the basic framework for a material app, this is a convenience widget that wraps several widgets that are commonly required for material (i.e., Google UI-style) design application.

Properties

Theme – This property is for default visual properties (as colors and shapes) for this app's material widgets.

Title – A text description used by the device to identify the app for the user (one line).

Home – The widget for the default route of the app (commonly points to the Homepage of the app).

2)

The key property allows Flutter to uniquely identify widgets, it is required because the widget can be removed or replaced by another widget. In this case, the key property affects the functionality of dismissible since the widget can be removed from the widget list.

