How it works:

The application takes input from the user using a textbox with a listener listening for keystrokes. When a key is pressed the application looks for the text the user is currently typing and presumes it’s a partially completed word. The program takes this word and asks a sqlite database for the 5 most likely completions to this word.

The program consists of two objects, the listener is in the main object while sql queries are handled by another object which is run on a child thread allowing the user to continue using the application even while the sql object is waiting for a reply from the database. Within the main object, once the word to be completed is obtained it is forwarded to the sql object and waits for it to reply with the five results and posts each result to a button for the user to choose from. The sql object receives the partially completed word and stores it in a variable arg and runs the following query: "SELECT WORD FROM dictionary WHERE WORD LIKE '" + arg + "%' ORDER BY COUNT DESC LIMIT 5;" . The result is then parsed into an array of 5 strings and is sent to the main object.

The database consists of two columns, WORD and COUNT. WORD contains each word that can be recommended to the user and COUNT determines which word is used more often than another. More specifically COUNT contains how many times that word has been chosen as the intended word and the word with the highest COUNT is considered to be the most likely to be used. Using this algorithm, the application will begin to learn what words really are more common for each user and will become more and more useful. The database is populated with the English dictionary and COUNT is initiated using various online articles so even on initial launch the application has a general idea of what words most users use more often.