Solutions to Android App Development Activity Summative Assessment Questions

1) The TinyDB is necessary to store data for any extended amount of time. If a database is not used, any data collected while the application is running will be lost once the app is closed.
2) In App Inventor, you would need to create the two buttons and then in the Blocks editor, create two Boolean objects (one for ON and one for OFF), two if statements, and two event handlers (one for the ON Button being clicked and the other for the OFF Button being clicked).

Inside the ON Button Clicked event, there would need to be an 'if' statement that tests to see whether the ON Button is currently pressed (ON Boolean is true) or not (ON Boolean is false). If the ON Boolean is already true, we should do nothing. If the ON Boolean is false, we need to set the ON Boolean to true and the OFF Boolean to false. The off button would work in a similar fashion (see pseudo-code below).

Boolean	Boolean
ON	OFF
Initial value: false	Initial value: true

When ON Button is clicked	When OFF Button is clicked
if[ON is false]	if[OFF is false]
-turn ON to true	-turn ON to false
-turn OFF to false	-turn OFF to true
If[ON is true]	If[OFF is true]
-do nothing	-do nothing