CHAPTER 3

METHODOLOGY

3.1 DEVELOPMENT PROCESS

The VDI development is started with the OBD-II Reader which is more complicated than the Car Control application. The OBD-II Reader is developed separately from the Car Control because of both of the application using their own Bluetooth communication. The separate application is made to ease to user to use and to avoid any mistakes in operating the application. The development of the software is focused on creating an understandable application and easy to do modification in the future.

3.2 OBD-II HARDWARE SELECTION

There are many OBD-II adapter devices in the market that range from RM 100 - 150. The OBD-II Reader uses the OBDmy Bluetooth adapter.
The standard OBD-II adapter have a total of 16 pins as seen in figure 3.2 which each of them have their own usage. For this OBDmy adapter, it made especially for the OBD-II which is using KWP2000 protocol vehicles (i.e Proton Saga BLM, Proton Satria Neo and Perodua Viva). Figure 7 below shows the pinouts and its function. Not all the pinouts is working as it depends on the protocols set by the car manufacturers as example the ISO-9141 OBD-II protocol use pin number 7.
Figure 3.2: OBD-II Adapter Pinouts

Source: Preet Kang et al 2013

Figure 3.3 is the block diagram for the OBD-II Reader. The Android device is communicates with the OBDmy Bluetooth adapter using serial over Bluetooth (SPP).

Figure 3.3: Hardware Block Diagram