Problem 3

The function virtual int setDirection(GPIO\_DIRECTION) is a function to set a GPIO pin to either an input or output. It takes one argument as an enumerated type of either INPUT or OUTPUT and returns a status as an int. The first line uses a case statement based off of the input. Inside the case statement, the program writes either “in” or “out” to the file “direction” in the objects gpio path (sys/class/gpio…). It returns the status of write. If neither case is true, it returns -1 indicating that the write failed.

The function virtual GPIO\_VALUE getValue() returns the value of a gpio pin as a GPIO)VALUE enumerated type. The first line reads the contents of the “value” file in the objects gpio path. This is then converted to the enumerated type in the if/else statement. If the contents of the “value” file are 0, the function returns LOW, and otherwise returns HIGH.