Worksheet 5

5.1 Try to walkthrough the following program and write down the expected results. Key-in the program and compare the results after execution. This program helps you to understand the use of *while* …. statement.

```c
/* This program finds the sum of a list of input integers */

#include <stdio.h>

int main (void)
{
   int Num;
   int LeftToRead;
   int NumOfData;
   int Sum;

      printf("\nWelcome.  This program adds a list of integers.");
      printf("\nHow many integers will there be in the list?  ");
      scanf("%d", &NumOfData);
      printf("\nNow type in the %d integers.\n", NumOfData);

      LeftToRead = NumOfData;
      Sum = 0;
      while (LeftToRead > 0)
      {
              scanf("%d", &Num);
              Sum += Num;
              LeftToRead -= 1;
      }

      printf("\nThe sum of the %d integers is %d", NumOfData, Sum);
      printf("\n");

      return 0;
}
```

Sample running 1:

Welcome. This program adds a list of integers.
How many integers will there be in the list?   *4*<CR>

Now type in the
70   5   126   9<CR>

Sample running 2:

Welcome. This program adds a list of integers.

Task **: Rewrite the above program by using**
       (a)   *do …. While* **statement**
       (b)   *for ….* **statement**
       instead of *while …* **statement.**