#1. a) Write the SPARC assembly instructions to define the following global variables in the data segment:

```assembly
char wayne[] = "Stacy’s Mom!";
int sh = -805;
double dd = 94.9;
```

#2. What is the value (in hex) of %o1 after each set of instructions:

a) set 0xFEEDDADA, %o1
    sll %o1, 8, %o1

Value in %o1 at this point is 0x_____________________________________

b) set 0xFEEDDADA, %o1
    sra %o1, 12, %o1

Value in %o1 at this point is 0x_____________________________________

c) set 0xFEEDDADA, %o1
    set 0x96969696, %o2
    or %o1, %o2, %o1

Value in %o1 at this point is 0x_____________________________________

d) set 0xFEEDDADA, %o1
    set 0x96969696, %o2
    btog %o2, %o1

Value in %o1 at this point is 0x_____________________________________
#3. Write the equivalent unoptimized SPARC assembly language instructions to perform the following C code fragment.

\[
\begin{array}{c|c}
\text{C} & \text{SPARC assembly} \\
\hline
x = 8675; & /* x is mapped to %l7 */ \\
\text{if ( } x > 59 ) & \\
\quad x = x + 15; & \\
\text{else} & \\
\quad x = x \% 6; & \\
\end{array}
\]

Now optimize your answer to eliminate any delay slots:

Optimized version of above SPARC assembly