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

```c
char incubus[] = "Megalomaniac";
long sli = -805;
double dd = 94.9;
```

#2. What is the value (in hex) of %01 after each set of instructions:

a)  
   ```c
   set 0xBABED0D0, %01
   sll %01, 16, %01
   ```
   Value in %01 at this point is 0x______________________________

b)  
   ```c
   set 0xBABED0D0, %01
   sra %01, 8, %01
   ```
   Value in %01 at this point is 0x______________________________

c)  
   ```c
   set 0xBABED0D0, %01
   set 0xA9A9A9A9, %02
   and %01, %02, %01
   ```
   Value in %01 at this point is 0x______________________________

d)  
   ```c
   set 0xBABED0D0, %01
   set 0xA9A9A9A9, %02
   btog %02, %01
   ```
   Value in %01 at this point is 0x______________________________

(over)
#3. Write the equivalent **unoptimized** SPARC assembly language instructions to perform the following C code fragment.

\[
\begin{align*}
\text{C} & \quad \text{SPARC assembly} \\
/* x is mapped to %10 */ \\
\text{if ( ((x * 3) > 7) && (x <= 37) )} \\
& \quad \text{fubar( x );}
\end{align*}
\]

Now optimize your answer to eliminate any **delay slots**:

\[
\begin{align*}
\text{Optimized version of above SPARC assembly}
\end{align*}
\]