Homework 3

1. Morse Code is considered a sequence of binaries. Please read about Morse Code and share the following findings:
   1. What is Morse Code?
   2. Who developed Morse Code?
2. Morse code is a character encoding scheme used in telecommunications. This standard of sequences (dots and dashes) equates to the 26 English letters A through Z. Morse code is transmitted by on-off keying medium in a wave such as an electric current, radio wave and light/sound waves.
3. Morse code was developed by Samuel F.B Morse who invented the telegraph which need a way to transmit a sensible language from one end to another.

int main()

{

\*((unsigned int\*)0x40023830) = 0x01;

\*((unsigned int\*)0x40020000) = 0xA8000400;

//\*((unsigned int\*)0x40020014) = 0x20;

//\*((unsigned int\*)0x40020014) = 0x00;

int counter = 0;

while (1)

{

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 2000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

//the start of the letter J (dot)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter J (first dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter J (second dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter J (third dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 2000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter A (first dot)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter A (first dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter M (first dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter M (second dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 2000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter I (first dot)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 2000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter I (Second dot)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 2000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter S (First dot)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 2000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter S (Second dot)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 2000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter S (Third dot)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 3000000) //turn off

{

counter++;

}

// letter O (First dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 3000000) //turn off

{

counter++;

}

// letter O (Second dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 3000000) //turn off

{

counter++;

}

// letter O (Third dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 5000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 3000000) //turn off

{

counter++;

}

// letter N (First dash)

\*((unsigned int\*)0x40020014) = 0x20; //LEN ON

counter = 0;

while(counter < 2000000) //turn on

{

counter++;

}

\*((unsigned int\*)0x40020014) = 0x00; //LED OFF

counter = 0;

while (counter < 2000000) //turn off

{

counter++;

}

// letter N (second dot )

//to do:

//mess with the dealys here for different timing

//this timing is based on the board specs(84 MHz)

//look up board timing spec then translate to morse code timing

}

return 0;

}