CSCI-21 Lab #3 – due 10/6/22

Make sure you have read chapter 2 in the text. Please work in groups of two on this. Write a Java, C or C++ program to implement the following code fragments. Then write flowcharts for the Java/C/C++ code fragments, and, by hand, translate them to MIPS assembly language. Put the code into a single program. Use registers to hold the values of `a` and `b`, not variables. You may reuse the registers to implement the different control structures, and single-step through the program to run it. Email me the Java/C/C++ source and the MIPS assembly language program. I do not want your flowcharts. As usual, include both of your names in the subject line and body of the email, and in the notes in the programs. (Note: the book's code for a for() loop does not match the real loop's logic.)

```
int a, b;
a = 0;
b = 0;
while( a < 10 )
{
   b += a;
   a++;
}
```

```
a = 0;
b = 0;
do {
   b += a;
   a++;
} while( a < 10 );
```

```
b = 0;
for(a = 0; a < 10; a++ )
{
   b += a;
}
```

```
a = 0;
b = 0;
if( a <= b )
{
   b = 10;
}
```

```
a = 0;
b = 0;
if( a < b )
{
   b = 10;
}
else
{
   a = 20;
}
```