lab04

```c
// EE231003 Lab04. Pythagorean Triples
// 108061213, 劉奕緯
// Date: October, 10, 2019
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#include<stdio.h>
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Function has not been covered in the class yet!
int gcd(int m, int n)                   // Find the max common factor of m, n
{
    while(n != 0) {
    while (n != 0) {
        int r = m % n;                  // Euclidean algorithm
Do not mix declarations with statements
        m = n;
        n = r;
    }
    return m;
}

int main(void)                          // main function start
{
    int a, b, c;                        // three edge of a triangle
    int n;                              // the numbers of pyhtogorean triangle
    int x, y;                           // let x and y difine the three edge
    int i;                              // an indicator in for loop

    for(x = 1; x < 143; x++){           // x from 1 to 142, since 142^2>20000
    for (x = 1; x < 143; x++) {           // x from 1 to 142, since 142^2>20000
        for(y = 1; y < x; y++) {        // y from 1 to x-1
        for (y = 1; y < x; y++) {         // y from 1 to x-1
            if(( x * y) % 2 == 0 && gcd(x, y) == 1 ){
            if ((x * y) % 2 == 0 && gcd(x, y) == 1) {
                                        /* only find basic pythogorean triangle
                                           by Euclidean formula for
                                           pythogorean triangle */
                c = x * x + y * y;
                a = (x + y) * (x - y);
                b = 2 * x * y;
                if (a < b){             // three edge output increasingly
                if (a < b) {              // three edge output increasingly
                    for(i = 1; c * i <= 20000; i++){
                    for (i = 1; c * i <= 20000; i++) {
                                        //output alike triangles where
                                        // output alike triangles where
                                        //the largest edge c below 20000
                                        // the largest edge c below 20000
```

```
37                          printf("Pythogorean Triple ");
38                          printf("#%d is (%d,%d,%d)\n", ++n, a*i, b*i, c*i);
                            printf("#%d is (%d,%d,%d)\n", ++n, a * i, b * i, c * i);
39                      }
40                  }
41                  else{
                    else {
42                      for(i = 1; c * i <= 20000; i++){
                        for (i = 1; c * i <= 20000; i++) {
43                          printf("Pythogorean Triple ");
44                          printf("#%d is (%d,%d,%d)\n", ++n, b*i, a*i, c*i);
                            printf("#%d is (%d,%d,%d)\n", ++n, b * i, a * i, c * i);
45                      }
46                  }
47              }
48          }
49      }
50      return 0;                           // funtion main end
51  }
52
```

[Format] can be improved.
[Coding] lab04.c spelling errors: difine(1), funtion(1), pyhtogorean(1), pythogorean(2)
[Variable] not initialized: n.
[Output] should match the example exactly.
[CPU time] 0.0150611 sec

Score: 61