4/15/19

```
a=1;
while (a<5)
{
    printf("%d ", a);
    a = a + 1;
}
```

Loop initialize

Loop Test

Loop body

Loop alter

```
for (a=1; a<5; a=a+1)
{
    printf("%d ", a);
}
```

Loop initialize

Loop test

Loop alter (done at end)

Loop body

Use for or use while

for - if number of iterations known

while - if number of iteration not known

Create Table as follows

n	n^2	n^3	n^4
1	1	1	1
2	4	8	16
3	9	27	81
⋮			
10	100	1000	1000

```
 1  #define _CRT_SECURE_NO_WARNINGS
 2  #include <stdio.h>
 3
 4  int main()
 5  {
 6      int n, n2, n3, n4;
 7      int start, finish;
 8      printf("Enter start value: ");
 9      scanf("%d", &start);
10      printf("Enter end value: ");
11      scanf("%d", &finish);
12      while (start <= finish)
13      {
14          //      xxx.xxxxxx.xxxxxxxxx.xxxxxxxxxxx
15          printf("         2         3            4\n");
16          printf(" n      n         n           n\n");
17          for (n = start; n <= finish; n++)
18          {
19              n2 = n * n;
20              n3 = n * n * n;
21              n4 = n * n * n * n;
22              printf("%3d %6d %9d %12d\n", n, n2, n3, n4);
23          }
24          printf("Enter start value: ");
25          scanf("%d", &start);
26          printf("Enter end value: ");
27          scanf("%d", &finish);
28      }
29      return 0;
30  }
```