

## Exercise 1

```
main.c
1 #include <stdio.h>
2
3 int main(void) {
4     int count = 1;
5     while(count<=4){
6         printf("%d", count);
7         count++;
8     }
9     return 0;
10 }
```

Console Shell

```
> clang-7 -pthread -lm -o main main.c
> ./main
1234>
```

## Exercise 2

```
main.c
1 #include <stdio.h>
2
3 int main(void) {
4     int num, count, sum = 0;
5
6     printf("Enter a positive integer: ");
7     scanf("%d", &num);
8
9     for(count= 1; count <= num; ++count){
10         sum += count;
11     }
12     printf("Sum = %d", sum);
13     return 0;
14 }
```

Console Shell

```
> clang-7 -pthread -lm -o main main.c
> ./main
Enter a positive integer: 4
Sum = 10>
```

## Exercise 3

```
main.c
1 #include<stdio.h>
2 int main(){
3     int i;
4     int j;
5     for(i=0; i<2; i++){
6         for(j=0; j<4; j++){
7             printf("%d, %d\n", i, j);
8         }
9     }
10     return 0;
11 }
```

Console Shell

```
> clang-7 -pthread -lm -o main main.c
> ./main
0, 0
0, 1
0, 2
0, 3
1, 0
1, 1
1, 2
1, 3
>
```

## Exercise 4

```
main.c
1 #include<stdio.h>
2 int main(){
3     int i,j;
4     for (i=1,j=1;i<3||j<5; i++,j++){
5         printf("%d, %d\n", i, j);
6     }
7     return 0;
8 }
```

Console

```
> clang-7 -pthread -lm -o main main.c
> ./main
1, 1
2, 2
3, 3
4, 4
>
```

## Exercise 5

```
main.c
1  #include<stdio.h>
2  int main(){
3      int answer = 41;
4      int guess;
5      int tries = 0;
6
7      do{
8          printf("guess the answer: ");
9          scanf("%d", &guess);
10         tries++;
11
12         if(guess > answer)
13             printf("the number is higher than answer\n");
14         if(guess < answer)
15             printf("the number is lower than answer\n");
16     }while(guess != answer);
17
18     printf("tries = %d\n", tries);
19     return 0;
20 }
```

Console

```
clang-7 -pthread -lm -
./main
guess the answer: 40
guess the answer: 42
the number is higher than
the number is lower than
guess the answer: 41
tries = 3

```

## Exercise 6

```
main.c
1  #include<stdio.h>
2  int main(){
3      for(int i=1; i<7; i++){
4          for(int j=0; j<i; j++){
5              printf("***");
6          }
7          printf("\n");
8      }
9      return 0;
10 }
```

Console

```
clang-7 -pthread -lm -
./main
**
****
*****
*****
*****
*****

```

## Exercise 7

```
main.c
1  #include<stdio.h>
2  int main(){
3      for(int i=5; i>0; i--){
4          for(int j=0; j<i; j++){
5              printf("****");
6          }
7          printf("\n");
8      }
9      return 0;
10 }
```

Console

```
clang-7 -pthread -lm -
./main
*****
*****
*****
****

```

## Exercise 8

```
main.c
1  #include<stdio.h>
2  int main(){
3      int n;
4      scanf("%d", &n);
5      for(int i=1; i<n+1; i++){
6          printf("%d\n",i);
7      }
8      return 0;
9  }
```

Console

```
> clang-
> ./main
40
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
```

## Exercise 9

```
main.c
1  #include<stdio.h>
2  int main(){
3      int n;
4      scanf("%d", &n);
5      for(int i=0; i<n+1; i++){
6          printf("%d\n", n-i);
7      }
8      return 0;
9  }
```

Console

```
clang-7
./main
40
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
```

## Exercise 10

```
main.c
1  #include<stdio.h>
2  int main(){
3      int n;
4      scanf("%d", &n);
5      for(int i=1; i<10; i++){
6          printf("%d * %d = %d\n", n, i, i*n);
7      }
8      return 0;
9  }
```

Console

```
clang-7
./main
4
4 * 1 = 4
4 * 2 = 8
4 * 3 = 12
4 * 4 = 16
4 * 5 = 20
4 * 6 = 24
4 * 7 = 28
4 * 8 = 32
4 * 9 = 36
```