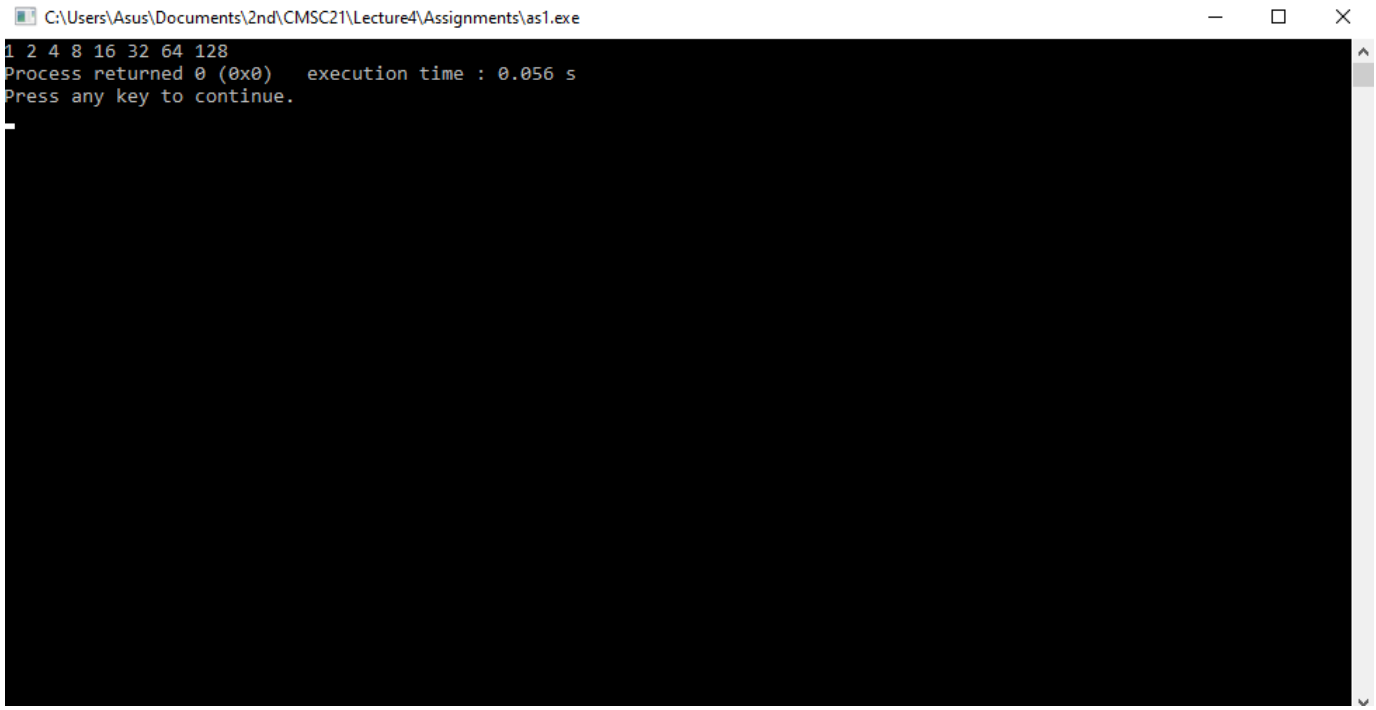
Lecture 4

1.

Start here | as1.c

```c
#include <stdio.h>
int main(void)
{
    int i;
    i = 1;
    while (i <= 128) {
    printf("%d ", i);
    i *= 2;
    }
    return 0;
}
```



2. The do-while is the statement that is not equivalent to the other two since it produces a different and unique output.

Start here | as5.c | as2.c

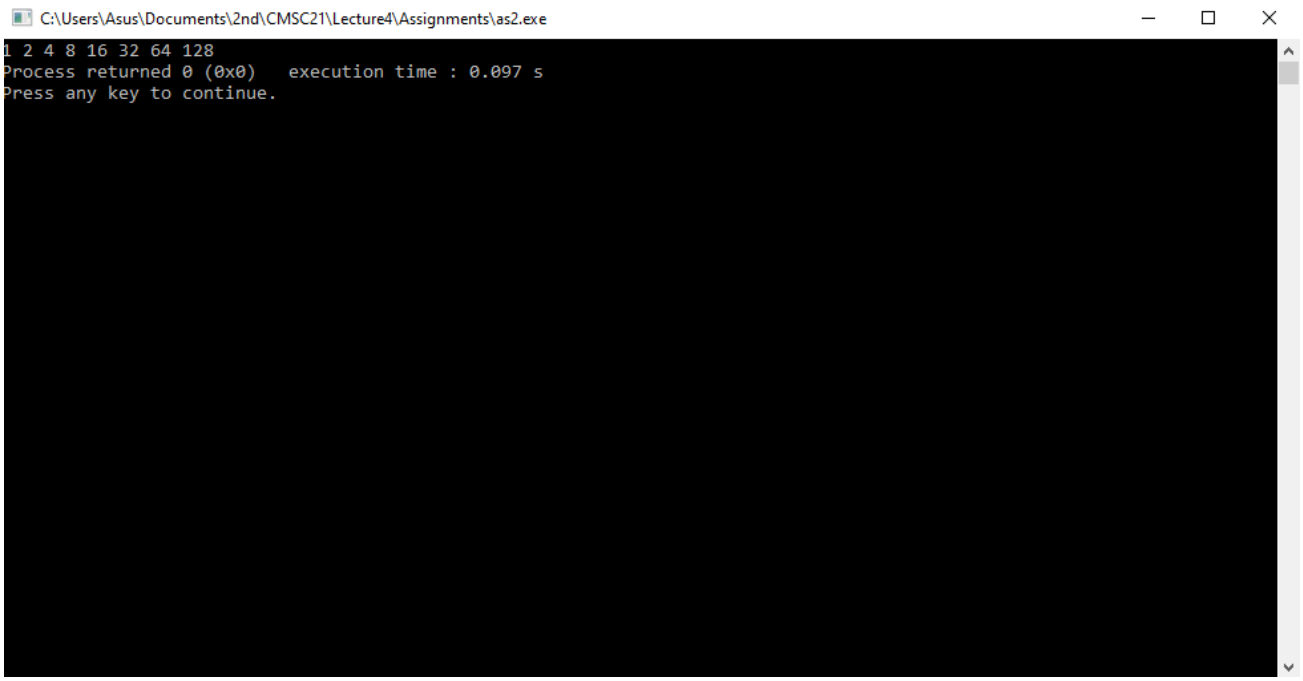
```c
#include <stdio.h>
int main(void){
    int i;
    i=1;

    printf("While Output: ");
    while (i < 10) {
        printf("\n%d",i);
        i += 1;
    }
    printf("\nFor Output: ");
    for (i=1; i < 10;i +=1 ) {
        printf("\n%d",i);
    }
    printf("\nDo-While Output: ");
    do {
        printf("\n%d",i);
        i += 1;
    } while (i < 10);
return 0;
}
```

```
C:\Users\Asus\Documents\2nd\CMSC21\Lecture4\Assignments\as2.exe
While Output:
1
2
3
4
5
6
7
8
9
For Output:
1
2
3
4
5
6
7
8
9
Do-While Output:
10
Process returned 0 (0x0)   execution time : 0.109 s
Press any key to continue.
```

3.

Start here | as1.c | as2.c

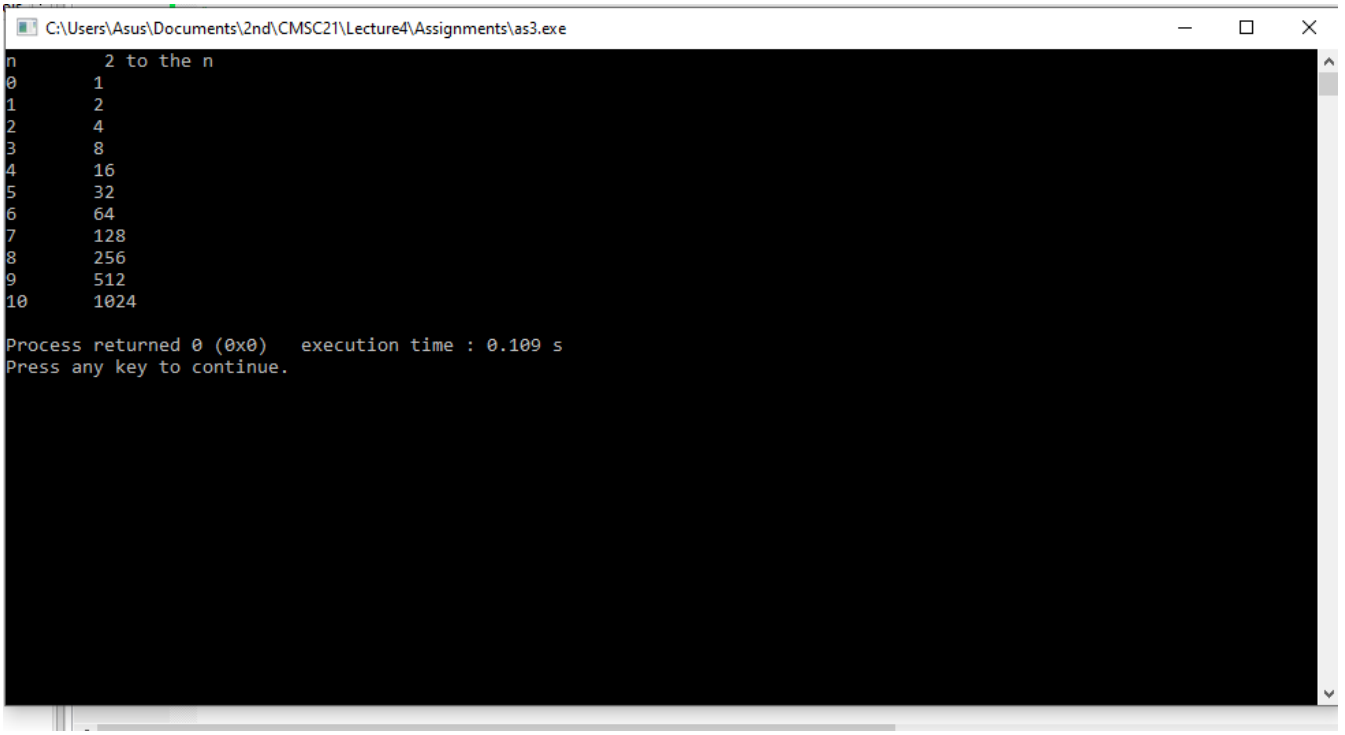
```c
#include <stdio.h>
int main(void)
{
    int i;
    for(i=1; i <= 128; i *=2) {
    printf("%d ", i);
    }
    return 0;
}
```



4.

Start here | as1.c | as2.c | as3.c

```c
#include <stdio.h>
int main(void){
    int i,j;

    j= 1;

    printf("n \t 2 to the n \n");

    for(i=0; i <=10; i += 1){
        printf("%i\t",i);
        printf("%d\n",j);
        j *= 2;
    }

}
```



5.

Start here | as5.c

```c
#include <stdio.h>
int main (void){
    int num_days, starting_day,i;

    i= 1;

    printf("Enter number of days in month: ");
    scanf("%d", &num_days);
    printf("Enter starting day of the weak (1=Sun, 7=Sat): ");
    scanf("%d", &starting_day);

    if(num_days >= 32 || num_days < 28){
        printf("Invalid Number of Days");
    }
    else{
       for(i=1; i <= starting_day; i++){
        printf("  ");
       }
       for(i=1; i <= num_days; i++ ){
        printf("%3d",i);
        if(((i+starting_day)-1)%7 == 0){
            printf("\n");
        }
       }
    }
    return 0;
```

```
C:\Users\Asus\Documents\2nd\CMSC21\Lecture4\Assignments\as5.exe
Enter number of days in month: 31
Enter starting day of the weak (1=Sun, 7=Sat): 4
          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
Process returned 0 (0x0)   execution time : 2.828 s
Press any key to continue.
```