

## Loop/Repetition Statements

### Lecture 4 Assignment

1.

```
Start here X as1.c X as2.c X *as3.c X as4.c X as5.c X
1  #include <stdio.h>
2  int main(void)
3  {
4      int i;
5      i = 1;
6      while (i <= 128) {
7          printf("%d ", i);
8          i *= 2;
9      }
10     return 0;
11 }
12
13 //Output is: 1 2 4 8 16 32 64 128
14
```

```
C:\Users\Hp\Documents\as1.exe
1 2 4 8 16 32 64 128
Process returned 0 (0x0)   execution time : 2.649 s
Press any key to continue.
```

2.

```
1  #include <stdio.h>
2  int main(void)
3  {
4      int i;
5      i = 10;
6      while (i < 10) {
7          printf("%d ", i);
8          i ++;
9      }
10     //Output is: None
11     printf("\n");
12
13     i = 10;
14     for (; i < 10; i++)
15         printf("%d ", i);
16         printf("\n");
17
18     //Output is: None
19
20     i = 10;
21     do {
22         i++;
23         printf("%d ", i);
24     }
25     while (i < 10);
26
27
28     //Output is: Executed Once
29
30     return 0;
31 }
```

```
"C:\Users\Hp\Desktop\CMSC 21\Lecture 4\as2.exe"
11
Process returned 0 (0x0)   execution time : 2.519 s
Press any key to continue.
```

3.

The screenshot shows a C program in a text editor and its execution output in a command prompt window.

```

1  #include <stdio.h>
2
3
4  int main() {
5      int i;
6
7
8      for(i = 1; i <= 128; i*=2) { //Arrange the Update into i multiplied by 2
9          printf("%d ", i);
10         }
11
12     return 0;
13 }
14

```

The command prompt window shows the output of the program:

```

C:\Users\Hp\Documents\as3.exe
1 2 4 8 16 32 64 128
Process returned 0 (0x0)   execution time : 0.013 s
Press any key to continue.

```

4.

The screenshot shows a C program in a text editor and its execution output in a command prompt window.

```

1  #include<stdio.h>
2  int main() {
3      int a, b;
4      a = 1;
5
6      for (b = 0; b <= 10; ++b) {
7          if (b == 0)
8              a = 1;
9          else
10             a *= 2;
11         printf("\n%2d   %2d  ", b, a);
12     }
13     return 0;
14 }
15

```

The command prompt window shows the output of the program:

```

C:\Users\Hp\Documents\as4.exe
0      1
1      2
2      4
3      8
4     16
5     32
6     64
7    128
8    256
9    512
10   1024
Process returned 0 (0x0)   execution time : 0.015 s
Press any key to continue.

```

5.

```

1      #include<stdio.h>
2      int main(){
3          int i,noofdays;
4          int first;
5          printf("enter no of days in a month:\n");
6          scanf("%d",&noofdays);
7          printf("enter starting day of the week:\n");
8          scanf("%d",&first);
9
10         if (noofdays >= 28 && noofdays <= 31 ){
11
12             for(i=1;i<first;i++)
13                 printf("  ");
14             for(i=1;i<=noofdays;i++){
15                 printf("%3d",i);
16                 if((first+i-1)%7==0)
17                     printf("\n");
18             }
19
20         else {
21             printf("Invalid Number");
22         }
23
24         return 0;
25     }
26

```

## RESTRICTIONS:

```

C:\Users\Hp\Documents\as5.exe
enter no of days in a month:
32
enter starting day of the week:
4
Invalid Number
Process returned 0 (0x0)   execution time : 3.637 s
Press any key to continue.

```

```

C:\Users\Hp\Documents\as5.exe
enter no of days in a month:
28
enter starting day of the week:
5
          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
Process returned 0 (0x0)   execution time : 16.307 s
Press any key to continue.

```

Github link: <https://github.com/elipancarl/CMSC21.git>