1.

```c
#include <stdio.h>

int main(void){
    int i;
    i = 1;

    while (i <= 128) {
    printf("%d ", i);
    i *= 2;
    }

    return 0;
}

```

```
1 2 4 8 16 32 64 128
Process returned 0 (0x0)   execution time : 0.072 s
Press any key to continue.
```

2.

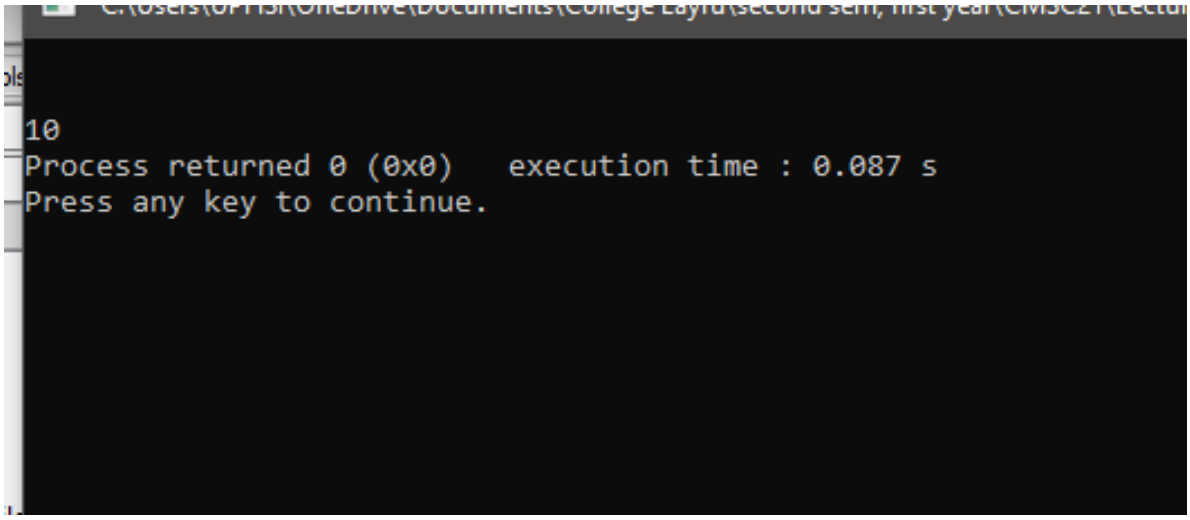
```c
#include <stdio.h>

int main(void){
    int i;

    i = 10;
    while (i < 10) {
        printf("%d ", i);
        i++;
    }
    printf("\n");
    for (i = 10; i < 10; i++) {
        printf("%d ", i);
    }
    printf("\n");
    i = 10;
    do {                    //differs from for and while since it executes
        printf("%d ", i);   //atleast once since it iterates even without
        i++;                // checking the condition
    } while (i < 10);


    return 0;
}

```



3.

```c
#include <stdio.h>

int main(void){
    int i;
    for (i = 1;i <= 128;i*=2) {
        printf("%d ", i);
    }

    return 0;
}

```

```
1 2 4 8 16 32 64 128
Process returned 0 (0x0)   execution time : 0.140 s
Press any key to continue.
```

4.

```c
//Prints table of powers of two

#include <stdio.h>

int main (void){ //main function
    int i = 0, n, product = 1; /*declares data type and variable names
                                 i is the power of two and should start at 0
                                 n is the number of entries in the table
                                 product is the result of powers of two*/

    //asks for number of entries
    printf("Enter number of entries in table: ");
    scanf("%d", &n);

    while (i<=n){ //iterates until i > n
        if (i == 0){                          //since any number raised to 0 is equal to 1,
            printf("%5d%10d \n", i, product*1); //the program will multiply the initial product to 1
            i++;
        }
        else{
            product*=2;
            printf("%5d%10d \n", i, product);   //displays power of two and product
            i++;
        }
    }
    return 0;
}

```

```
Enter number of entries in table: 10
    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 : 14.052 s
Press any key to continue.
```

5.

```c
//Displays one month calendar

#include <stdio.h>

int main (void){ //main function

    int days, start, n; /*declares data type and variable names
                          days for number of days in a month
                          start for the day of the week on which the month begins
                          n for the day of the month */

    //ask for number of days
    printf("Enter number of days in a month: ");
    scanf("%d", &days);

    if (days == 28 || days == 30 || days == 31){ //checks if input is valid

        //asks for the start of the month if the number of days is valid
        printf("Enter the starting day of the week (1 = Sun, 7 = Sat): ");
        scanf("%d", &start);

        //checks if input is valid
        if (start >= 1 && start <=7){
            for (n = 1; n < start; n++){
                printf("    "); //displays blank spaces before the start of the month
            }

            n = 1;
            while (n <= days){
                printf("%3d", n); //displays days of the month
                if ((start + n - 1)%7 == 0){ //checks if one row has 7 columns
                    printf("\n");
                }
                n++;
            }

        }
        else{
            printf("Invalid input.");
        }
    }
    else{
        printf("Invalid input.");
    }

    return 0;
}
```

```
Enter number of days in a month: 31
Enter the starting day of the week (1 = Sun, 7 = Sat): 3
          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 : 5.364 s
Press any key to continue.
```