1. 1 2 4 8 16 32 64 128

```c
C Language > C week4_1.c > main(void)
1   #include <stdio.h>
2
3   int main(void)
4   {
5       int i;
6       i = 1;
7       while (i <= 128)
8       {
9           printf("%d ", i);
10          i *= 2;
11      }
12      return 0;
13  }
```

```
OUTPUT    TERMINAL    DEBUG CONSOLE

Windows PowerShell
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PS C:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C Language> cd "c:\Users\admin\Desktop\UP Clas
1 2 4 8 16 32 64 128
PS C:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C Language>
```

2. Based on the output of the three loops the do while loop has a different output among the rest.

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

    printf("\n");

    //Output: 0 1 2 3 4 5 6 7 8 9
    for (i = 0; i < 10; i++)
    printf("%d ", i);
    printf("\n");

    //output: 10
    i = 0;
    do
    {
        i++;
    }
    while (i < 10);
    printf("%d ", i);

```

OUTPUT   TERMINAL   DEBUG CONSOLE

PS C:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C Language> cd "c:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C Language\" ; if ($?) { gcc week4_2c.c -o week4_2c } ; if ($?) { .\week4_2c }
0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9
10
PS C:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C Language>

3.

```c
#include <stdio.h>

int main(void)
{
    int i;

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

    }
    return 0;
}
```

4.

```c
#include <stdio.h>

int main(void)
{
    int n;
    int i = 1;
    printf("Enter n term: ");
    scanf("%d", &n);
    while (n >= 0)
    {

        printf("%d ", i);
        i *= 2;
        n --;
    }
    return 0;
}
```

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```
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PS C:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C Language> cd "c:\Users\admin\Desktop\UP Cla
Enter n term: 10
1 2 4 8 16 32 64 128 256 512 1024
PS C:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C Language>
```

5.

```c
#include<stdio.h>
int main()
{
    int i, days, start_day;
    printf("Enter number of days in month: ");
    scanf("%d",&days);
    printf("Enter the starting day of the week (1=Sun, 7=Sat): ");
    scanf("%d",&start_day);

    if(days < 28 || days > 31)
    {
        printf("Invalid input please try again from the start.");
        return 0;
    }
    else
        for(i=1;i<start_day;i++)
            printf("    ");

        for(i = 1;i <= days;i++)
        {
            printf("%3d",i);
            if((start_day + i - 1) % 7==0)
            {
                printf("\n");
            }
        }
    return 0;
}
```

OUTPUT   TERMINAL   DEBUG CONSOLE

```
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PS C:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C Language> cd "c:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C La
Enter number of days in 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
PS C:\Users\admin\Desktop\UP Class 2nd sem\CMSC 21\C Language>
```