Week 6

Q1)

main.c

Share Run

```c
// Online C compiler to run C program online
#include <stdio.h>

int main(){
    int num, sum=0;
    printf("Enter a number and it will be added to the
        sum\nEntering '0' ends the code");

    do {
        printf("\nEnter a number: ");
        scanf("%d", &num);
        sum+=num;
        printf("Sum = %d", sum);
        if (num==0) printf("\nEnd of code");
    } while (num!=0);

    return 0;
}
```

Output

```
/tmp/FvgABmVFks.o
Enter a number and it will be added to the sum
Entering '0' ends the code
Enter a number: 2
Sum = 2
Enter a number: 3
Sum = 5
Enter a number: 9
Sum = 14
Enter a number: 23
Sum = 37
Enter a number: 0
Sum = 37
End of code

=== Code Execution Successful ===
```

Q2)

main.c

Share Run

```c
// Online C compiler to run C program online
#include <stdio.h>

int main() {
    int num, counter = 0;
    printf("Enter a number: ");
    scanf("%d", &num);
    int abc=num;

    if (num == 0) counter = 1;
    else if (num < 0) num = -num;

    for (; num>0; counter++) {
        num /= 10;
    }

    printf("\n%d has %d digits", abc, counter);
    return 0;
}
```

Output

```
/tmp/IoMW6Kyomx.o
Enter a number: 5496

5496 has 4 digits

=== Code Execution Successful ===
```

Q3)

main.c

Share Run

```c
int num, counter=0, count=0;
printf("Enter a number (positive only): ");
scanf("%d", &num);
int abc=num;
int xyz=num;
if (num<=0) printf("Invalid input");
else {
    for (; num>0; counter++) {
        num /= 10;
    }
    printf("\n%d has %d digits and", abc, counter);

    for (int i=1; i<=xyz; i++) {
        int rem = xyz%i;
        if (rem==0) count+=1;
    }
    if (count==1) printf(" is a unique number");
    else if (count==2) printf(" is a prime number", abc);
    else if (count>2) printf(" is a composite number", abc
        );
```

Output

```
/tmp/B9oIuU1xj2.o
Enter a number (positive only): 67

67 has 2 digits and is a prime number

=== Code Execution Successful ===
```

Q4)

main.c

Share Run

```c
// Online C compiler to run C program online
#include <stdio.h>

int main(){
    int num, num1=1, num2=2, sum;
    printf("Enter number of terms: ");
    scanf("%d", &num);
    printf("%d ", num1);
    printf("%d ", num2);
    for (int i=1; i<=num-2; i++) {
        sum = num1 + num2;
        printf("%d ", sum);
        num1 = num2;
        num2 = sum;
    }
}
```

Output

```
/tmp/mYO7nRWoo4.o
Enter number of terms: 7
1 2 3 5 8 13 21

=== Code Execution Successful ===
```

Q5)

main.c

Share Run

```c
// Online C compiler to run C program online
#include <stdio.h>
int main() {
    int num = 65536;
    int divconst = 1;
    int result;

    for (; result != 0; ) {
    divconst += 1;
    result = num/divconst;
    printf("\n%d", result);
    num = result;
}
    return 0;
}
```

Output

```
/tmp/2a433qGOBD.o

32768
10922
2730
546
91
13
1
0

=== Code Execution Successful ===
```

Q6)

main.c

Share Run

```c
// Online C compiler to run C program online
#include <stdio.h>

int main(){
    int num, num1=1, num2=2, prod;
    printf("Enter number of terms: ");
    scanf("%d", &num);
    printf("%d ", num1);
    printf("%d ", num2);
    for (int i=1; i<=num-2; i++) {
        prod = num1 * num2;
        printf("%d ", prod);
        num1 = num2;
        num2 = prod;
    }
}
```

Output

```
/tmp/IArWcFU45b.o
Enter number of terms: 9
1 2 2 4 8 32 256 8192 2097152

=== Code Execution Successful ===
```