1. Which loop system would be better for user input. Justify your answer by creating a program that takes a value and adds it to a variable and prints it repeatedly until the user enters a zero value.

```
PS C:\Users\fahad\.vscode\C codes> gcc lab6q1.c
PS C:\Users\fahad\.vscode\C codes> ./a.exe
Enter a value :5
Enter a value :6
Enter a value :8
Enter a value :0
The sum is 19
PS C:\Users\fahad\.vscode\C codes>
```

2. Write a program to check whether a given number is a multiple digit number or not.

 Example: 123 is a multiple digit number.

 6 is not a multiple digit number.

```
PS C:\Users\fahad\.vscode\C codes> gcc lab6q2.c
PS C:\Users\fahad\.vscode\C codes> ./a.exe
Enter a number :123
The number is a multiple digit number
PS C:\Users\fahad\.vscode\C codes> gcc lab6q2.c
PS C:\Users\fahad\.vscode\C codes> ./a.exe
Enter a number :6
The number is not a multiple digit number
PS C:\Users\fahad\.vscode\C codes>
```

3. Using the above program integrate the number if it is a prime or composite number.

```
PS C:\Users\fahad\.vscode\C codes> gcc lab6q3.c
PS C:\Users\fahad\.vscode\C codes> ./a.exe
Enter a number :8
the number is a composite number
PS C:\Users\fahad\.vscode\C codes> gcc lab6q3.c
PS C:\Users\fahad\.vscode\C codes> ./a.exe
Enter a number :30
the number is a composite number
PS C:\Users\fahad\.vscode\C codes> gcc lab6q3.c
PS C:\Users\fahad\.vscode\C codes> ./a.exe
Enter a number :7
the number is a prime number
PS C:\Users\fahad\.vscode\C codes>
```

4. Write a program to print the following series: 1, 2, 3, 5, 8, 13.

```
PS C:\Users\fahad\.vscode\C codes> gcc lab6q4.c
PS C:\Users\fahad\.vscode\C codes> ./a.exe
1       2       3       5       8       13
PS C:\Users\fahad\.vscode\C codes>
```

```
PS C:\Users\fahad\.vscode\C codes> gcc lab6q5.c
PS C:\Users\fahad\.vscode\C codes> ./a.exe
65536   32768   10922   2730    546     91      13      1       0
PS C:\Users\fahad\.vscode\C codes>
```
5.

```
PS C:\Users\fahad\.vscode\C codes> gcc lab6q6.c
PS C:\Users\fahad\.vscode\C codes> ./a.exe
1       2       2       4       8       32      256     8192    2097152
PS C:\Users\fahad\.vscode\C codes>
```
6.