Mathematical Logical Question in JavaScript

Q-1. Suppose in a Class, the Teacher asked students of roll number 1 to write 0 and roll number 2 to write 1 on the blackboard and asked for the rest of the students, to write the summation of your previous two students'. The series written on the board will look like 0,1,1,2,3,5,8,…….

The teacher then told the students, this series is known as the **Fibonacci series**. It can be represented by the below equation

```
Fn = Fn-1 + Fn-2
```

Where F0=1 and F1=1. The Fibonacci numbers are the numbers in the following integer sequence 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, …….. In mathematical terms, the sequence Fn of Fibonacci numbers is defined by the recurrence relation

```
Fn = Fn-1 + Fn-2 with seed values F0 = 0 and F1 = 1
```

Sample input :

```
Input : 5
Output : 8

Input :8
Output :34
```

Q-2. A prime number is a number that is divisible by 1 and itself only. First few prime numbers are: 2, 3, 5, 7, 11, 13, 17, … A JavaScript uses the DOM model to check the input number is prime or not and display its corresponding alert message on the screen.

Sample Input :

```
Input : 4
Output : Not Prime

Input : 5
Output : Prime
```

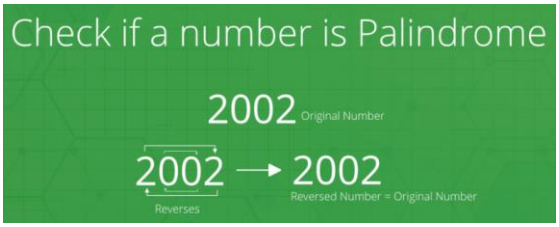
Q-3. Given a positive integer n and the task is to find the factorial of that number with the help of javaScript.

Sample Input :

```
Input : 4
Output : 24

Input : 5
Output : 120
```

Q-4. Given an integer, write a function that returns true if the given number is palindrome, else false. For example, 12321 is palindrome, but 1451 is not palindrome



Q-5. Given a matrix of order m*n then the task is to find the frequency of even and odd numbers in matrix

Sample Input :

```
Input : m = 3, n = 3
        { 1, 2, 3 },
        { 4, 5, 6 },
        { 7, 8, 9 }
Output : Frequency of odd number =  5
         Frequency of even number = 4
```