1. Write a function to reverse a string.
2. Write a function to check if a number is even or odd.
3. Write a function to find the factorial of a number.
4. Write a function to find the maximum value in an array.
5. Write a function to find the average of an array of numbers.
6. Write a function to remove duplicates from an array.
7. Write a function to find the second largest number in an array.
8. Write a function to check if a string is a palindrome.
9. Write a function to find the longest word in a string.
10. Write a function to convert a string to a title case.
11. Write a function to count the number of vowels in a string.
12. Write a function to generate an array of fibonacci numbers.
13. Write a function to check if an object is empty.
14. Write a function to merge two arrays.
15. Write a function to find the union of two arrays.
16. Write a function to find the intersection of two arrays.
17. Write a function to sort an array in ascending order.
18. Write a function to sort an array in descending order.
19. Write a function to find the difference between two arrays.
20. Write a function to check if a number is prime.
21. Write a function to find the smallest common multiple of two numbers.
22. Write a function to find the greatest common divisor of two numbers.
23. Write a function to check if a number is a power of 2.
24. Write a function to convert a decimal number to binary.
25. Write a function to convert a binary number to decimal.
26. Write a function to find the sum of all elements in an array.
27. Write a function to check if a string is a valid email address.
28. Write a function to check if a string contains only letters.
29. Write a function to check if a string contains only numbers.
30. Write a function to check if a string contains only alphanumeric characters.
31. Write a function to check if a string starts with a specific character.
32. Write a function to check if a string ends with a specific character.
33. Write a function to find the frequency of a character in a string.
34. Write a function to find the length of a string without using the length property.
35. Write a function to check if a number is positive or negative.
36. Write a function to find the sum of all positive numbers in an array.
37. Write a function to find the sum of all negative numbers in an array.
38. Write a function to find the sum of all prime numbers in an array.
39. Write a function to find the sum of all even numbers in an array.
40. Write a function to find the sum of all odd numbers in an array.
41. Write a function to check if a number is a perfect square.
42. Write a function to check if a number is a perfect cube.
43. Write a function to check if a number is a fibonacci number.
44. Write a function to find the nth fibonacci number.
45. Write a function to find the factorial of a number without using recursion.
46. Write a function to check if a number is a armstrong number.
47. Write a function to check if a string is a palindrome ignoring spaces and punctuation.
48. Write a function to find the perimeter of a rectangle.
49. Write a function to find the area of a circle.
50. Write a function to find the circumference of a circle.

**Problem Statement:**

Create a simple RESTful API that allows you to manage a list of books. The API should allow you to:

1. Get a list of all books
2. Get a book by its ID
3. Create a new book
4. Update a book by its ID
5. Delete a book by its ID

**Requirements:**

* Use Node.js and Express to build the API
* Store the books in a JSON file
* Use the following structure for each book:

jsonCopy code

{ "id": 1, "title": "The Great Gatsby", "author": "F. Scott Fitzgerald", "year": 1925, "pages": 180 }

**Bonus points:**

* Use proper error handling
* Implement filtering and pagination for the list of books
* Use proper HTTP response codes
* Add support for adding, updating, and deleting multiple books at once

**Evaluation Criteria:**

* Code quality and readability
* Proper error handling
* Use of HTTP response codes
* Proper use of the Express framework
* Proper use of RESTful API conventions