# Coding Practice Questions

### Day-1

1. **Implement a program to check whether the given number is even number or odd number.**

   **Input Format**

   An integer value

   **Constraints**

   n>=0

   **Output Format**

   **even** or **odd** or **invalid**

2. **Given an integer n, perform the following conditional actions,**
   **If n is odd, print weird,**
   **If n is even and in the inclusive range of 2 to 5, print not weird,**
   **If n is even and in the inclusive range 6 to 20, print weird,**
   **If n is even and greater than 20, print not weird.**

   **Input Format**

   An integer value from the user.

   **Constraints**

   1<=n<=100

   **Output Format**

   Weird or Not Weird

3. **Implement a program to calculate the free number of cups the user gets for a specified number of cups bought by the user. In this particular case, the user gets 1 cup free for every 6 cups bought. (Example: If the user buys 12 cups, he gets 2 cups free as per the Buy 6 Get 1 Free offer, and hence the output will be 12+2 = 14 cups).**

   **Input Format**

   The input here is the number of coffee cups bought by the user.

   **Constraints**

   number of cups>=1.

   **Output Format**

   The output is the total number of cups the user gets including the free coffee cups

4. **Implement a program to extract digits from the given number**

   **Input Format**

   a number from the user

   **Constraints**

   Number>0

   **Output Format**

   print digits in line separated by space

5. **Implement a program to calculate sum of digits present in the given number.**

   **Input Format**

   A number from the user

   **Constraints**

Number>0

**Output Format**

print sum of digits


**Day: 2**

6. **Implement a program to calculate sum of even digits present in the given number.**

    **Input Format**

    A number from the user

    **Constraints**

    Number>0

    **Output Format**

    Print sum of even digits


7. **Implement a program to calculate sum of odd digits present in the given number.**

    **Input Format**

    A number from the user

    **Constraints**

    Number>0

    **Output Format**

    Print sum of odd digits

8. **Implement a program to check prime or not.**

9. **Implement a program to print prime number between range.**

**10. Implement a program to print nth prime number.**

<u>**Day 3:**</u>

**11. Implement a program to calculate sum of prime digits present in the given number**

**Input Format**

a number from the user

**Constraints**

n>0

**Output Format**

print sum of prime digits

# Pattern Printing

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*                               *
* *                           * *
* * *                       * * *
* * * *                   * * * *
```

```
        *
      * * *
    * * * * *
  * * * * * *
```

```
                    *
                  * * *
                * * * * *
              * * * * * * *
            * * * * * * * * *
              * * * * * * *
                * * * * *
                  * * *
                    *
                  * * *
                * * * * *
```

```
*                   *
* * *           * * *
* * * * *     * * * * *
* * * * * * * * * * * *
```

```
* * * * * *             *               *
  * * * *             * *             * *
    * * *           * * *           * * *
     *             * *             * *
                    *               *
```

```
          *

        * * *

      * * * * *

    * * * * * *

      * * * * *

        * * *

          *




  * * * * * * * * * * * * * * * *
    * * * * * * *   * * * * * * *
      * * * * *       * * * * *
        * * *           * * *
          * * * * * * * * *
            * * * * * * *
              * * * * *
                * * *
                  *
```

```
      *                               *
           *                      *
   *            *              *       *
        *            *      *       *
   *        *            *      *       *
        *        *           *      *
   *        *                *      *
        *                     *
   *                               *


   * * * * * * * * * * * * * * * * * * * * * *
     *              *    *         *    *              *
       *              *      *        *      *         *
         *      *              *    *            *    *
           *                     *              *
         *      *              *    *            *    *
       *              *      *        *      *         *
     *              *    *         *    *              *
   * * * * * * * * * * * * * * * * * * * * * * * *
```

1. 1, 2, 1, 3, 2, 5, 3, 7, 5, 11, 8, 13, 13, 17…. find Nth Term.
2. 0,0,2,1,4,2,6,3,8,4,10,5,12,6,14,7,16, 8... find Nth Term.
3. Given a maximum of four digits to the base 17 (10 – A, 11 – B, 12 – C, 13 – D … 16 – G} as input, output its decimal value.

   input – 1A

   Expected Output – 27
4. Replace all 0's with 1 in a given integer.
5. Write a c program to check given number is perfect number or not.
6. Write a c program to check given number is Armstrong number or not.
7. Write a c program to check given number is palindrome number or not.
8. Write a c program to check given string is palindrome number or not.
9. Write a c program to print Fibonacci series of given range.
10. Write a c program to get factorial of given number.
11. Write a c program to print ASCII value of all characters.
12. C program to print hello world without using semicolon.
13. Write a c program to reverse any number.
14. Write a c program to find out sum of digit of given number.
15. Write a c program to find out power of number.
16. Write a c program to add two numbers without using addition operator.
17. Write a c program to find largest among three numbers using conditional operator.
18. Write a c program to find out prime factor of given number.
19. How to convert string to int without using library functions in c.
20. C program for swapping of two numbers.
21. Write a c program to swap two numbers without using third variable.
22. Program to find largest of n numbers in c.
23. Write a c program to find out L.C.M. of two numbers.
24. Write a c program to find out H.C.F. of two numbers.
25. Write a c program to convert decimal number to binary number.
26. Write a c program to convert decimal number to octal number.
27. Write a c program to convert decimal number to hexadecimal number.
28. Write a c program to convert octal number to binary number.
29. Write a c program to convert octal number to decimal number.
30. Write a c program to convert octal number to hexadecimal number.
31. Write a c program to convert hexadecimal number to binary number.
32. Write a c program to convert hexadecimal number to octal number.
33. Write a c program to convert hexadecimal number to decimal number.
34. Write a c program to convert binary number to octal number.
35. Write a c program to convert binary number to decimal number.
36. Write a c program to convert binary number to hexadecimal number.
37. C program for addition of binary numbers.
38. Write a c program to convert the string from upper case to lower case.
39. Write a c program to convert the string from lower case to upper case.
40. Write a c program to delete the all consonants from given string.
41. Write a c program to count the different types of characters' in given string.
42. Write a c program to sort the characters of a string.
43. Write a c program to find the length of a string using pointer.

44. Write a c program which prints initial of any name.
45. Write a c program to print the string from given character.
46. Write a c program to reverse a string.
47. Write a c program for addition of two matrices.
48. Write a c program for subtraction of two matrices
49. Write a c program for multiplication of two matrices.
50. Write a c program to find out sum of diagonal element of a matrix.
51. Write a c program to find out absolute difference between sum of diagonal element of a matrix.
52. Write a c program to find out transport of a matrix.
53. Write a c program for scalar multiplication of matrix.
54. C program to find inverse of a matrix.
55. C program to find determinant of a matrix
56. Write a c program to find out largest element of an array.
57. Write a c program to find out second largest element of an unsorted array.
58. Write a c program to find out second smallest element of an unsorted array.
59. Write a c program which deletes the duplicate element of an array.
60. Write a c program for delete an element at desired position in an array.
61. Write a c program for insert an element at desired position in an array.
62. C program to find largest and smallest number in an array.
63. Write a c program for bubble sort.
64. Write a c program for insertion sort.
65. Write a c program for selection sort.
66. Write a c program for quick sort.
67. Write a c program for heap sort.
68. Write a c program for merge sort.
69. Write a c program for shell sort.
70. Write a c program to find factorial of a number using recursion.
71. Write a c program to find GCD of a two numbers using recursion.
72. Write a c program to find out sum digits of a number using recursion.
73. Write a c program to find power of a number using function recursion.
74. Write a c program to reverse any number using recursion.
75. Write a c program for linear search.
76. Write a c program for binary search.
77. Write a c program for binary search using recursion.
78. Write a C program to convert a given integer (in days) to years, months and days, assumes that all months have 30 days and all years have 365 days.
79. Write a C program to convert a given integer (in seconds) to hours, minutes and seconds.
    Test Data :
    Input seconds: 25300
    Expected Output: H:M:S - 7:1:40
80. Number of times digit 3 occurs in each and every number from 0 to n.
81. Find the count of numbers less than equal to N having exactly 9 divisors.
82. Floyd's triangle.
83. Pascal triangle.

84. Count the number of vowels.
85. Remove vowels from a string.
86. Remove characters in a string except alphabets.
87. Remove spaces from a string.
88. Calculate the sum of numbers in a string.
89. Capitalize the first and last letter of each word of a string.
90. Frequency of characters in a string.
91. Replace substring in a string.
92. Count common subsequence in two strings.
93. Remove duplicate elements in an array
94. Missing elements of a range.
95. Triplets with a given sum.
96. Array rotation - Left and right.
97. Block swap algorithm for array rotation.
98. Array is a subset of another array or not.
99. Merge two sorted arrays.
100. Longest subarray having an average greater than or equal to k.
101. Sum of all odd frequency elements in an array.
102. Matrix rotation by 90 degrees clockwise and anticlockwise.
103. Get the second largest element in an array.
104. Count total number of negative elements in an array.
105. Copy all elements from an array to another array.
106. Put even and odd elements of an array in two separate arrays.
107. Find a total number of alphabets, digits or special character in a string.
108. Find the first occurrence of a character in a given string.
109. Find the last occurrence of a character in a given string.
110. Search all occurrences of a character in a given string.
111. Count occurrences of a character in a given string.
112. Find highest frequency character in a string.
113. Find lowest frequency character in a string.
114. Count frequency of each character in a string.
115. Remove the first occurrence of a character from a string.
116. Remove the last occurrence of a character from a string.
117. Delete all occurrences of a character from a string.
118. Remove all repeated characters from a given string.
119. Replace the first occurrence of a character with another in a string.
120. Replace the last occurrence of a character with another in a string.
121. Put all occurrences of a character with another in a string.
122. Find the first occurrence of a word in a given string.
123. Find the last occurrence of a word in a given string.
124. Search all occurrences of a word in a given string.
125. Count occurrences of a word in a given string.
126. Remove the first occurrence of a word from string.
127. Remove the last occurrence of a word in a given string.
128. Delete all occurrence of a word in a given string.
129. A Trim leading white space characters from a given string.

130. Trim trailing white space characters from a given string.
131. Trim both leading and trailing white space characters from a given string.
132. Add two numbers using pointers.
133. Swap two numbers using pointers.
134. Input and print array elements using a pointer.
135. Copy one array to another using pointer.
136. Swap two arrays using pointers.
137. Reverse an array using pointers.
138. Search an element in an array using pointers.
139. Access two-dimensional array using pointers.
140. Add two matrix using pointers.
141. Multiply two matrix using pointers.
142. Find the length of string using pointers.
143. In short How to Copy one string to another using pointer.
144. Concatenate two strings using pointers.
145. Compare two strings using pointers.
146. Find reverse of a string using pointers.
147. Sort array using pointers.
148. Return multiple values from a function using pointers.
149. Cube of any number using the function.
150. Find diameter, circumference and area of a circle using functions.
151. Maximum and minimum between two numbers using functions.
152. Check whether a number is even or odd using functions.
153. Check whether a number is prime, Armstrong or perfect number using functions.
154. Find all prime numbers between the given interval using functions.
155. Print all strong numbers between the given interval using functions.
156. Armstrong numbers between the given interval using functions.
157. Print all perfect numbers between the given interval using functions.
158. Find the power of any number using recursion.
159. Print all natural numbers between 1 to n using recursion.
160. Print all even or odd numbers in given range using recursion.
161. Sum of all natural numbers between 1 to n using recursion.
162. Find the sum of all even or odd numbers in a given range using recursion.
163. Find reverse of any number using recursion.
164. Check whether a number is a palindrome or not using recursion.
165. Find the sum of digits of a given number using recursion.
166. Find factorial of any number using recursion.
167. Generate nth Fibonacci term using recursion.
168. Find gcd (HCF) of two numbers using recursion.
169. Find lcm of two numbers using recursion.
170. Display all array elements using recursion.
171. Find the sum of elements of the array using recursion.
172. Find maximum and minimum elements in an array using recursion.
173. Count the total number of notes in a given amount.
174. Insert an Element Desired or Specific Position in an Array.
175. Remove Duplicates Items in an Array.

176. Delete Element from Array at Desired or Specific Position
177. Print "I AM IDIOT" Instead of Your Name Using Array.
178. Check String Is Palindrome or Not Using for Loop.
179. Convert All Input String Simultaneously into Asterisk (*).
180. Given a maximum of 100 digit numbers as input, find the difference between the sum of odd and even position digits.
181. Finding Number of times x digit occurs in a given input.
182. Sort first half in ascending order and second half in descending.
183. Finding the Longest Palindrome in an Array.
184. Balanced Parenthesis Problem.
185. Find the "Kth" max and min element of an array.