Accenture 2025 Shift Coding Sheet

1. Alex Gives You a positive Number N and wants you to rearrange the bits of the
   number in its binary representation such that all set bits are in consecutive order.
   Your task is to find and return an integer value representing the minimum possible
   number that can be formed after re-arranging the bits of the number N.

2. Two players A and B are playing the game of Rock, Paper and scissors. Player A
   chooses a move represented by String M and the move can be one of the following: Bock,
   paper or scissors
   where 1- Rock beats scissors
   2- Scissor beats paper
   3- Paper beats rock
   Your task is to find and return a string value representing the
   winning move fop B.

   Is Palindrome?

3. You are on a hiking trail represented by an Array A of length N. where the trial initially ascends
   and then descends forming a single peek. Your task is to find and return an integer value
   representing the elevation of the summit.

4. Find First K words of the string

5. N light bulbs are connected by a wire. Each bulb has a switch associated with it,
however due to faulty wiring, a switch also changes the state of all the bulbs to the
right of current bulb. Given an initial state of all bulbs, Find the minimum number
of switches you have to press to turn on all the bulbs. You can press the same
switch multiple times.
Note: O represents the bulb is off and 1 represents the bulb is on.

6. You are working on a financial analysing tool which represents daily stock prices of a
company over time. Each element in an integer array A of size N represents the closing price
of the stock for that particular day. Your task is to find and return an integer value
representing the total number of days where the stock market price decreased indicating
negative growth.

7. Alice has a pair of magical shoes that allows her to climb 3 stairs at once. In the city there are
N houses whose roof Alice wants to reach. The number of roofs of each house is given in an
array A. Alice can reach the roof of only those houses where the number is a multiple of 3.
Your task is to find and return integer value representing the count of the number of houses
whose roof Alice can climb.

8. Alice has collection of songs represented as a string S where each character represents a
song. A playlist is the substring of the given string with exactly k number of songs. She wants
to create a playlist that contains maximum number of her favourite song

which is 'a'. Your task
is to find and return an integer value representing the maximum number of favourite songs
that she can get in a single playlist.

9. The function accepts an integer array 'arr' of size 'n' as its argument. The function needs to
return the index of an equilibrium point in the array, where the sum of elements on the left
of the index is equal to the sum of elements on the right of the index. If no equilibrium point
exists return -1.

10. Jack has an array A of length N. He wants to label whether the number in the arrayis even or
odd. Your task is to help him find and return a string with labels even or odd in sequence
according to which the numbers appear in the array.

11. You are given a string S and your task is to find and return the count of permutation formed
by fixing the positions of the vowels present in the string.
Note:
• Ensure the result is non-negative
• If there are no consonants then return O.

12. A googly prime number is defined as a number that is derived from the sum of its individual
digits. For example, if N = 43, the sum of its individual digits is 4+3 = 7, which is prime
making it a googly prime number. 4
Your task is to find whether the current number is googly prime number or not.

13. You are provided with a string which has a sequence of Is and Os. This sequence is the
encoded version of a english word. You are supposed to write a program to decode the
provided string and find the original word. Each uppercase Alphabet is representing by a
sequence of Is.

14. Convert a number N into its binary form

15. Given string and two characters chl,ch2 as input, replace all occurences of ch with ch2 and
ch2 with chi in the input string.

16. Charles is given an array A. He wants to find the count of occurrences of second largest
element in the array. Your task is to help him find and return an integer value representing the
count of occurrence of the second largest element in an array.
Note:
If the array contains same element, then return O.
The array has only consecutive elements i.e in sorted order.

17. You are given four integers a, b, c and d. Find the sum of numbers out of these four
numbers and print the same.
Print 0 if no negative number present.

18. Given an array,String arr = {"gender", "blender", " blunder", "under"}
Input string is " thunder" . From the array return the word that rhymes the most with the given
word. And if two words rhymes the most then return the word with less character count.
(example in blunder and under, the output will be "under") .

19. You are playing a game of Toss and Score in the Hillwood City Mall with your friends. The
game consists of the following rules:
• Toss an unbiased coin multiple times.
• For each heads you get ? points and for each tails you lose 1 point.
• The game ends as soon as you get 3 heads in a row, or you toss the coin throughtout the
length of string S.
You have been given a string S consisting of letters H (for heads) and T (for tail
sequence of result. Your task is to find and results you get on the toss of coin N
integer value representing the final score you get once the game ends.

20. calculate spaces of two given input strings and return a string with whether their differrence is
odd or even with ":" and count

21. You are given a special Fibonacci sequence defined by the following recurrence relation:

f(N)=f(N-1)Xf(N-1)+f(N-2)Xf(N-2)
With initial conditions:

f(0)=1

f(1)=1

22. You are given a string S and your task is to find and return the count of permutation formed
by present in the string

23. Given an array A of length N and we have to find the sum of even positions after reversing
the array, Your task is to help him find and retum an integer value representing sum of the
array elements present at the even positions of the reversed array.

24. Print the 2nd Smallest number from an array

25. A football match is ongoing and every time a team scores, their name is recorded on a scoreboard. The names are either "TeamA" or "TeamB", depending on which team scored the goal. Once the match ends, your task is to determine which team scored more goals.

26. Given an Integer Array Arr, Rotate the array to the right by k steps, where k is negative.

27. Jack has an array A of length N. He wants to label whether the number in the array is even or
odd. Your task is to help him find and return a string with labels even or odd in sequence
according to which the numbers appear in the array.

28. You are given an integer array coins representing coins of different denominations and an
integer amount representing a total amount of money.
Return the fewest number of coins that you need to make up that amount. If that amount of
money cannot be made up by any combination of the coins, return -1.
You may assume that you have an infinite number of each kind of coin.

29. Find the Character C occurrences in a string

30. You are given a string S and your task is to find and return the count of permutation
formed by fixing the positions of the vowels present in the string.
Note:
    - Ensure the result is non-negative
    - If there are no consonants then return O.

31. Input a string S. Delete all the vowel occurrences in that string which occur only between the

consonants and return the modified string.

32. Input an NXN matrix mat() and find the minimum value of K such that all the elements in the rows and columns of the Kth index are zero irrespective of the element at (k,k)

33. Write an algorithm to determine if a number n is happy.
A happy number is a number defined by the following process:
    a. Starting with any positive integer, replace the number by the sum of the squares of its digits.
    b. Repeat the process until the number equals 1 (where it will stay), or it loops endlessly in a cycle
    which does not include 1.
    c. Those numbers for which this process ends in 1 are happy.
    Return true if n is a happy number, and false if not.

34. You are climbing a staircase. It takes n steps to reach the top.
Each time you can either climb l or 2 steps. In how many distinct ways can you climb to the top?

35. You are given an integer array nums. You want to maximize the number of points you get by
performing the following operation any number of times:
Pick any nums[i] and delete it to earn nums[i] points. Afterwards, you must delete every
element equal to nums[iJ - l and every element equal to nums[i] + l.
Return the maximum number of points you can earn by applying the above operation some
number of times.

36. An array of minutes are given. We have to count the no. Of pairs that form a whole hour on
summation.

37. Given an array of n distinct integers. The task is to check whether reversing any one sub-array
can make the array sorted or not. If the array is already sorted or can be made sorted by
reversing any one subarray, print "Yes", else print "Noa.

38. Bob goes to super market to shop candies represented by an array A for halloween party, his
mother gave him some money M. Due to the festive season, there are several offers in the
supermarket. One such offer useful for Bob is, if the price of the candy is a multiple of 5, he can
buy it without spending any money otherwise he will Spend money equal to Ali] which is the price
of a particular candy. Bob can shop as long as he has money. Your task is to find and return the
maximum number of candies Bob can buy.

39. You are given an array of length n and a index k where You need to print the absolute
difference between the sum of element to the left of index k and sum of elements to the right
of index k.

40. You are given a string which contains some consonants and vowel in lowercase letters.you need
to print the maximum frequency of all the vowels present in the string.

41. Assume you are an awesome parent and want to give your children some cookies. But, you should
give each child at most one cookie.
Each child i has a greed factor g[il, which is the minimum size of a cookie that the child will be
content with; and each cookie j has a size s[j]. If s[j] >= g[i], we can assign the cookie j to the child i,

and the child i will be content Your goal is to maximize the number of your content children and
output the maximum number.

42. Given an integer n, break it into the sum of k positive integers, where k >= 2, and maximize the
product of those integers.
Return the maximum product you can get.

43. Given the coordinates of any two vertices of a square (XI, YI) and (X2, Y2), the task is to find the
coordinates of the other two vertices. If a square cannot be formed using these two vertices, print -1.