Submission: Friday, 16 Feb, 2024 by 11:59 pm (Submit in ELMS)

Q.1 Write a C program that will give the **sum of first Nth terms** for the following series.

1, -3, 5, -7, 9, -11, 13, -15……..

Sample input	*Sample output*
2	Result: -2
3	Result: 3
4	Result: -4

Q.2 Write a program to perform the **following operations**:

i. **Assign** (LAST_TWO_DIGITS_OF_YOUR_STUDENT_ID % 21) + 5 to integer variable **b**.
ii. **Declare** a one-dimensional integer array A of **size 10**.
iii. **Initialize** the array values with **a%7 + 3i**, Where a = LAST_4_DIGITS_OF_YOUR_STUDENT_ID and i = array index.
iv. **Find** the **sum of the numbers** that are stored in **even numbered indices** in the array.

Q.3 Write a C program that takes an integer **n** as input from the user and **prints** a specific pattern given as follows. For example, for **n = 4**, the output pattern will be as follows. You must program for n, NOT for 4.

a) *****
*****
*****
*****

b) 12345
12345
12345
12345

c) 54321
12345
54321
12345

Q.4 In the **XYZ** Company, the **total salary of an employee** is calculated as follow:

Total salary = Basic salary + House rent + Medical allowance – Provident fund – Income tax

The **different components** are calculated as follow:

i) If **Basic salary <= 40000**, House rent = 25% of Basic salary. If **Basic salary <= 80000**, House rent = 30% of Basic salary. **Otherwise**, House rent = 40% of Basic salary.

ii) If **Basic Salary <= 60000**, Medical allowance = 50% of Basic salary. **Otherwise**, Medical allowance = 70% of Basic salary.

iii) If **Basic Salary <= 40000**, Provident fund = 2000. If **Basic Salary <= 100000**, Provident fund = 4000. **Otherwise**, Provident fund = 5000.

iv) A **fixed amount of Tk. 1500** is deducted as **Income tax**.

Now, using these information, write a **C program** to **calculate the total salary** of an employee. You **must take as input** the basic salary, and print the total salary.