DAY 1 (VARIABLE AND OPERATOR)

1. Write a C program to take two integer values from user and display their sum, difference, multiplication and division.

2. Write a C program to take total marks of an exam and total marks obtained by a student in that exam. Then calculate the percentage of marks of that student.

3. Write a C program to swap two integer values using a third variable.

4. Write a C program to swap two integer values without using a third variable.

5. Write a C program to take temperature in °C and display its equivalent °F temperature.

DAY 2 (VARIABLES AND OPERATORS)

1. Write a C program to find the power of a number.

2. Write a C program to convert days into years, weeks and days.

3. Write a C program to find the square root of any number.

4. Write a C program to calculate compound interest.

$$CI = P\left(1 + \frac{R}{100}\right)^{T}$$

Formula:-

5. Write a C program to find maximum number between three number using conditional operator.

6. Write a C program to check whether a number is even or odd using conditional operator.

DAY 3 (IF-ELSE)

1. Write a C program to take three float value from user and check all following cases. Whether a>b>c or b>a>c, or c>a>b or a=b>c, a=c>b or a=b=c etc.

2. Write a C program to take a temperature and check whether that temperature is less than freezing or equal to freezing or more than freezing.

3. Write a C program to take total marks of a student & determine his/her division using following conditions: - if marks is >=600 then 1st divisions or if marks <600 but marks>=450 then 2nd division or marks<450 but marks>=300 then 3rd divisions. Otherwise fail.

4. Write a C program to calculate electric bill amount using following conditions: - if amount is within 800 then no tax required. If amount is more than or equal to 800 but less than 1200 then 10 %(on bill amt.) of tax will be added to the amount. If amount is more than or equal to 1200 but less than 2000 then 15 %(on bill amt.) of tax will be added to the amount. If amount is more than 1999 then 22% of tax will be charged.

DAY 4 (IF-ELSE)

1. Write a C program to check whether an entered character is a digit, alphabets or special character.

2. Write a C program to take sales amount & grade of a sales man and then calculate his commission using following criterion. If sale amount is >=12000 and grade is more than 5 then commission will be 23.5% of the sale amount. But if sale amount is >=12000 and grade is less than 5 and more than 3 then commission will be 23% of the sales amount. If sale amount is <12000 and grade is more than 5 then commission will be 22.4% of sale amount. Otherwise commission will be 21.8%.

3. Write a C program to count different denomination (note of 2000,500,100,50,20,10) for a given amount of money.

4. Write a C program to check if a number is even or odd using bitwise operator. (Also execute the program using conditional and bitwise operator).

DAY 5 (SWITCH)

1. Write a C program to read gender (M/F/m/f) and print corresponding gender using switch.
2. Write a C program to design calculator with basic operations (+,-,*,/,%) using switch.
3. Write a C program to check whether a character is vowel or consonant using switch.
4. Write a C program to read month number from user and print total number of days in input month using switch.
5. Write a C program to check whether an input number is Even or Odd using switch.
6. Write a C program to read grade as input and show the text according to the following table:-

Grade	Output Text
A	Excellent
B	Well Done
C	Well Done
D	You passed
F	Better try again

DAY 6 (LOOP)

1. Write a C program to print "Good Morning" 10 times.

2. Write a C program to display the following figure.

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

User will provide the number of lines.

3. Write a C program to display the following figure.

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

User will provide the number of lines.

DAY 7 (LOOP)

1. Write a C program to display the following figure.

```
0
10
101
0101
```

User will provide the number of lines.

2. Write a C program to display the following figure

```
0
10
101
0101
```

User will provide the number of lines.

3. Write a C program to display the following figure.

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

User will provide the number of lines.

DAY 8 (LOOP)

1. Write a C program to take an integer number from the user and calculate its factorial & display the result.

2. Write a C program to display the Fibonacci Series up to a user defined terms.

DAY 9 (LOOP)

1. Write a C program to take an integer value and reverse it and display.

2. A palindromic number or numeral palindrome is a 'symmetrical' number like 16461 that remains the same when its digits are reversed. Write a C program to take an integer value from user and check whether it is palindrome or not.

3. Armstrong numbers are the sum of their own digits to the power of the number of digits. As that is a slightly brief wording, let me give an example: $153 = 1^3 + 5^3 + 3^3$.

   Write a c program to take an integer number form use and check whether it is an Armstrong number or not.

DAY 10 (LOOP)

1. Write a C program to take an integer number form user ant print its sum of digits. i.e. if user input is 237, output will be 12 (2+3+7).

2. Write a C program to print the sum of the following series

   1+3+5+7+9+.....+n. Value of n (odd umber) will be provided by the user.

3. Write a C program to print the sum of the following series
   1+4+9+16+25+36+..... $+n^2$. Value of n will be provided by the user.

DAY 11 (LOOP)

1. Write a C program to print the sum of the following series
   2+4+6+8+----------+n. value of n will be provided by the user.

2. Write a C program to print the sum of the following series
   1-2+3-4+5-6+----------(+/-)n. Value of n will be provided by user.

3. Write a C program to print the sum of the following series
   1*c+2*c+3*c+4*c+----------+n*c. Here c is a constant and value of c & n will be provided by the user.

DAY 12(ARRAY)

1. Write a C program to take 10 integer values from user and display them in reverse order.

2. Write a C program to take 15 float values from the user and then display their sum and average.

3. Write a C program to take 10 integer values from the user and display the maximum and minimum out of that list.

1. Write a C program to take 10 integer values from user and display separately those numbers which are less than average of all number and also display those numbers which re more than average.

2. Write a C program to take 10 float values from user and arrange them descending order.

3. Write a C program to take 10 integer values from user. Then take a integer value from user and search that value in the array. If present, then display the array index. Otherwise print NOT PRESENT.

DAY 14 (ARRAY)

1. Write a C program to take 10 integer values from user. Then take a integer value from user and square that. Then search that squared value from array. If exists, then show its position. Otherwise print SQUARED TERM NOT PRESENT.

2. Write a C program to take a word from user and check whether it is palindrome or not.

DAY 15 (ARRAY)

1. Write a C program to take a name from the user and abbreviate it in following way: - Sumit Kumar Sen → S.K.S.

2. Write a C program to take a name from the user and abbreviate it in following way:- Sumit Kumar Sen → S.K.Sen

DAY 16 (ARRAY)

1. Write a C program to take a word from the user and reverse it.

2. Write a C program to take a word from the user and count how many vowels are present in that word.

3. Write a C program to take a word from the user and calculate number of repetition of each vowel.

DAY 17 (ARRAY)

1. Write a C program to take a sentence from the user and display umber of white spaces present in that sentence.

2. Write a C program to take two integer arrays of 10 elements. Take values in both arrays. Then in another array store the sum of each item present in each index of previous two arrays. Example:-

Input Array

5	4	3	2	7	3	8	10	-15	9

4	6	17	7	2	9	90	-8	3	3

Result Array

9	10	20	9	9	12	98	2	-12	12

DAY 18 (FUNCTION)

1. Write a C program to implement mathematical operation (sum,sub,div,mul) of two user given number. Implements each operation using separate functions. There will be no arguments in function and input will be taken at each function separately.

2. Implements the above program in menu driven way. That is if user chooses 1, add function will work. If 2 then sub function will work and so on. (Hint:- use switch-case)

3. Implements the above program but inputs should be taken in main and the same should be passed to the respective function by function arguments.

DAY 19 (FUNCTION)

1. Write a C program to implements a function void swap (float, float). It will swap value two float variable. Take the value of the variable in main () and swap using that function.

2. Implements the above program using concept of call by reference.

3. Write a C program to implements a function which will take an array as argument. Then using that function maximum element of that array.

DAY 20 (FUNCTION)

1. Write a C program to implements a function which will take an array and an integer as arguments. Then using that function searches that integer (2^{nd} argument) from that array(1st argument).

2. Write a recursive function to calculate the factorial of a given number.

DAY 21 (POINTER)

1. Write a C program to calculate length of a string using pointer

2. Write a C program to Concate a string into another using pointer

DAY 22 (POINTER)

1. Write a C program to COPY a string into another using pointer

2. Multiply two matrix using function by call by address

DAY 23 (STRUCTURE)

1. Write a program using structures to read and display the information about a student.
2. Write a program to read, display, add, and subtract two complex numbers.

DAY 24 (STRUCTURE)

1. Write a program, using structures, to find the biggest of three numbers.
2. Implement DAY23 (1) by using pointer and function.