C ASSIGNMENT

Week 1(Day 1-6)

1. **Write a C program to enter two numbers and find their sum.**
2. **Write a C program to enter two numbers and perform all arithmetic operations.**
3. **Write a C program to enter length and breadth of a rectangle and find its perimeter.**
4. **Write a C program to enter length and breadth of a rectangle and find its area.**
5. **Write a C program to enter radius of a circle and find its diameter, circumference and area.**
6. **Write a C program to enter length in centimeter and convert it into meter and kilometer.**
7. **Write a C program to enter temperature in Celsius and convert it into Fahrenheit.**
8. **Write a C program to enter temperature in Fahrenheit and convert to Celsius**
9. **Write a C program to print your name, date of birth and mobile number.**

Expected Output:
Name : Amit Jain
DOB : July 14, 1975
Mobile : 91-9999999999

10. Write a C program to print a block F using hash (#), where the F has a height of six characters and width of five and four characters.

Expected Output:

```
######
#
#
######
#
#
#
```

11. Write a C program to print a big 'C'

Expected Output:

```
  #######
 ##     ##
##
#
#
#
#
 ##     ##
  #######
```

12. Write a C program to print the following characters in a reverse way.

Test Characters: 'X', 'M', 'L'

Expected Output:

The reverse of XML is LMX

13. Write a C program to compute the perimeter and area of a rectangle with a height of 7 inches. and width of 5 inches

Expected Output:

Perimeter of the rectangle = 24 inches
Area of the rectangle = 35 square inches

14. Write a C program to compute the perimeter and area of a circle with a radius of 6 inches.

Expected Output:

Perimeter of the Circle = 37.680000 inches
Area of the Circle = 113.040001 square inches

15. Write a C program to display multiple variables.
Sample Variables :
a+ c, x + c,dx + x, ((int) dx) + ax, a + x, s + b, ax + b, s + c, ax + c, ax + ux
Declaration :
int a = 125, b = 12345;
long ax = 1234567890;
short s = 4043;
float x = 2.13459;
double dx = 1.1415927;
char c = 'W';
unsigned long ux = 2541567890;

16. Write a C program to convert specified days into years, weeks and days.
Note: Ignore leap year.
Test Data :
Number of days : 1329
Expected Output :
Years: 3
Weeks: 33
Days: 3

17. Write a C program that accepts two integers from the user and calculate the sum of the two integers.
Test Data :
Input the first integer: 25
Input the second integer: 38
Expected Output:
Sum of the above two integers = 63

18. Write a C program that accepts two integers from the user and calculate the product of the two integers.
Test Data :
Input the first integer: 25
Input the second integer: 15
Expected Output:
Product of the above two integers = 375

Week 2(Day 7-12)

19. Write a C program to find maximum between two numbers.
20. Write a C program to find maximum between three numbers.
21. Write a C program to check whether a number is negative, positive or zero.
22. Write a C program to check whether a number is divisible by 5 and 11 or not.
23. Write a C program to check whether a number is even or odd.
24. Write a C program to check whether a year is leap year or not.
25. Write a C program to check whether a character is alphabet or not.
26. Write a C program to input any alphabet and check whether it is vowel or consonant.
27. Write a C program to input any character and check whether it is alphabet, digit or special character.
28. Write a C program to check whether a character is uppercase or lowercase alphabet.
29. Write a C program to input week number and print week day.

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30. Write a C program to input month number and print number of days in that month.
31. Write a C program to count total number of notes in given amount.
32. Write a C program to input angles of a triangle and check whether triangle is valid or not.
33. Write a C program to input all sides of a triangle and check whether triangle is valid or not.
34. Write a C program to check whether the triangle is equilateral, isosceles or scalene triangle.
35. Write a C program to find all roots of a quadratic equation.
36. Write a C program to calculate profit or loss.
37. Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:

Percentage >= 90% : Grade A
Percentage >= 80% : Grade B
Percentage >= 70% : Grade C
Percentage >= 60% : Grade D
Percentage >= 40% : Grade E
Percentage < 40% : Grade F

38. Write a C program to input basic salary of an employee and calculate its Gross salary according to following:

Basic Salary <= 10000 : HRA = 20%, DA = 80%
Basic Salary <= 20000 : HRA = 25%, DA = 90%
Basic Salary > 20000 : HRA = 30%, DA = 95%

39. Write a C program to input electricity unit charges and calculate total electricity bill according to the given condition:

For first 50 units Rs. 0.50/unit
For next 100 units Rs. 0.75/unit
For next 100 units Rs. 1.20/unit
For unit above 250 Rs. 1.50/unit
An additional surcharge of 20% is added to the bill

40. Write a C program that accepts two item's weight (floating points' values) and number of purchase (floating points' values) and calculate the average value of the items.

Test Data :
Weight - Item1: 15
No. of item1: 5
Weight - Item2: 25
No. of item2: 4
Expected Output:
Average Value = 19.444444

41. Write a C program that accepts an employee's ID, total worked hours of a month and the amount he received per hour. Print the employee's ID and salary (with two decimal places) of a particular month.

Test Data :
Input the Employees ID(Max. 10 chars): 0342
Input the working hrs: 8
Salary amount/hr: 15000
Expected Output:
Employees ID = 0342
Salary = U$ 120000.00

42. Write a C program that accepts three integers and find the maximum of three.

Test Data :
Input the first integer: 25

Input the second integer: 35
Input the third integer: 15
Expected Output:
Maximum value of three integers: 35

43. **Write a C program to calculate a bike's average consumption from the given total distance (integer value) traveled (in km) and spent fuel (in liters, float number – 2 decimal point).**
Test Data :
Input total distance in km: 350
Input total fuel spent in liters: 5
Expected Output:
Average consumption (km/lt) 70.000

44. **Write a C program to calculate the distance between the two points.**
Test Data :
Input x1: 25
Input y1: 15
Input x2: 35
Input y2: 10
Expected Output:
Distance between the said points: 11.1803

45. **Write a C program to read an amount (integer value) and break the amount into smallest possible number of bank notes.**
Test Data :
Input the amount: 375
Expected Output:
There are:
3 Note(s) of 100.00
1 Note(s) of 50.00
1 Note(s) of 20.00
0 Note(s) of 10.00
1 Note(s) of 5.00
0 Note(s) of 2.00
0 Note(s) of 1.00

46. **Write a C program to convert a given integer (in seconds) to hours, minutes and seconds.**
Test Data :
Input seconds: 25300
Expected Output:
There are:
H:M:S - 7:1:40

47. **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.**
Test Data :
Input no. of days: 2535
Expected Output:
6 Year(s)
11 Month(s)
15 Day(s)

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48. **Write a C program that accepts 4 integers p, q, r, s from the user where r and s are positive and p is even. If q is greater than r and s is greater than p and if the sum of r and s is greater than the sum of p and q print "Correct values", otherwise print "Wrong values".**

Test Data :
Input the first integer to
Input the second integer: 35
Input the third integer: 15
Input the fourth integer: 46
Expected Output:
Wrong values

49. **Write a C program to print the roots of Bhaskara's formula from the given three floating numbers. Display a message if it is not possible to find the roots.**

Test Data :
Input the first number(a): 25
Input the second number(b): 35
Input the third number(c): 12
Expected Output:
Root1 = -0.60000
Root2 = -0.80000

50. **Write a C program that reads an integer and check the specified range where it belongs. Print an error message if the number is negative and greater than 80.**

Test Data :
Input an integer: 15
Expected Output:
Range [0, 20]

51. **Write a C program that read 5 numbers and sum of all odd values between them.**

Test Data :
Input the first number: 11
Input the second number: 17
Input the third number: 13
Input the fourth number: 12
Input the fifth number: 5
Expected Output:
Sum of all odd values: 46

52. **Write a C program that reads three floating values and check if it is possible to make a triangle with them. Also calculate the perimeter of the triangle if the said values are valid.**

Test Data :
Input the first integer: 5
Input the second integer: 15
Input the third integer: 10
Expected Output:
Numbers in sorted order: 5 10 15

Week 3(Day 13-16)

53. **Write a C program to print day of week name using switch case.**
54. **Write a C program print total number of days in a month using switch case.**
55. **Write a C program to check whether an alphabet is vowel or consonant using switch case.**

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56. Write a C program to find maximum between two numbers using switch case.
57. Write a C program to check whether a number is even or odd using switch case.
58. Write a C program to check whether a number is positive, negative or zero using switch case.
59. Write a C program to find roots of a quadratic equation using switch case.
60. Write a C program to create Simple Calculator using switch case.
61. Write a C program to print all natural numbers from 1 to n. - using while loop
62. Write a C program to print all natural numbers in reverse (from n to 1). - using while loop
63. Write a C program to print all alphabets from a to z. - using while loop
64. Write a C program to print all even numbers between 1 to 100. - using while loop
65. Write a C program to print all odd number between 1 to 100.
66. Write a C program to find sum of all natural numbers between 1 to n.
67. Write a C program to find sum of all even numbers between 1 to n.
68. Write a C program to find sum of all odd numbers between 1 to n.
69. Write a C program to print multiplication table of any number.
70. Write a C program to count number of digits in a number.
71. Write a C program to find first and last digit of a number.
72. Write a C program to find sum of first and last digit of a number.
73. Write a C program to swap first and last digits of a number.
74. Write a C program to calculate sum of digits of a number.
75. Write a C program to calculate product of digits of a number.
76. Write a C program to enter a number and print its reverse.
77. Write a C program to check whether a number is palindrome or not.
78. Write a C program to find frequency of each digit in a given integer.
79. Write a C program to enter a number and print it in words.
80. Write a C program to print all ASCII character with their values.
81. Write a C program to find power of a number using for loop.
82. Write a C program to find all factors of a number.
83. Write a C program to calculate factorial of a number.
84. Write a C program to find HCF (GCD) of two numbers.
85. Write a C program to find LCM of two numbers.
86. Write a C program to check whether a number is Prime number or not.
87. Write a C program to print all Prime numbers between 1 to n. Write a C program to print Pascal triangle upto n rows.
88. Write a C program to find sum of all prime numbers between 1 to n.
89. Write a C program to find all prime factors of a number.
90. Write a C program to check whether a number is Armstrong number or not.
91. Write a C program to print all Armstrong numbers between 1 to n.
92. Write a C program to check whether a number is Perfect number or not.
93. Write a C program to print all Perfect numbers between 1 to n.
94. Write a C program to check whether a number is Strong number or not.
95. Write a C program to print all Strong numbers between 1 to n.
96. Write a C program to print Fibonacci series up to n terms.
97. Write a C program to print Pascal triangle upto n rows.

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

Square Star Pattern

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

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

Hollow Square Star PatternWeek 5

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

Hollow Square Star Pattern with Diagonal

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

Rhombus Star Pattern

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

Hollow Rhombus Star Pattern

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

Mirrored Rhombus Star Pattern

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

Hollow Mirrored Rhombus Star Pattern

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

Right Triangle Star Pattern

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

Hollow Right Triangle Star Pattern

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

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

Mirrored Right Triangle Star Pattern

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

Hollow Mirrored Right Triangle Star Pattern

98. Write a C program that reads three floating values and check if it is possible to make a triangle with them. Also calculate the perimeter of the triangle if the said values are valid.

Test Data :
Input the first number: 25
Input the second number: 15
Input the third number: 35
Expected Output:
Perimeter = 75.0

99. Write a C program that reads two integers and checks if they are multiplied or not.

Test Data :
Input the first number: 5
Input the second number: 15
Expected Output:
Multiplied!

100. Write a C program that reads an integer between 1 and 12 and print the month of the year in English.

Test Data :
Input a number between 1 to 12 to get the month name: 8
Expected Output:
August

101. Write a C program that prints all even numbers between 1 and 50 (inclusive).

Test Data :
Even numbers between 1 to 50 (inclusive):
Expected Output:
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50

102. Write a C program that read 5 numbers and counts the number of positive numbers and negative numbers.

Test Data :
Input the first number: 5
Input the second number: -4
Input the third number: 10
Input the fourth number: 15
Input the fifth number: -1
Expected Output:
Number of positive numbers: 3
Number of negative numbers: 2

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103. Write a C program that read 5 numbers and counts the number of positive numbers and print the average of all positive values.

Test Data :
Input the first number: 5
Input the second number: 8
Input the third number: 10
Input the fourth number: -5
Input the fifth number: 25
Expected Output:
Number of positive numbers: 4
Average value of the said positive numbers: 12.00

104. Write a C program that read 5 numbers and sum of all odd values between them.

Test Data :
Input the first number: 5
Input the second number: 7
Input the third number: 9
Input the fourth number: 10
Input the fifth number: 13
Expected Output:
Sum of all odd values: 34

105. Write a C program to find and print the square of each one of the even values from 1 to a specified value.

Test Data :
List of square of each one of the even values from 1 to a 4 :
Expected Output:
2^2 = 4
4^2 = 16

106. Write a C program to check a given integer is positive even, negative even, positive odd or negative odd. Print even if the number is 0.

Test Data :
Input an integer: 13
Expected Output:
Positive Odd

107. Write a C program to print all numbers between 1 to 100 which divided by a specified number and the remainder will be 3.

Test Data :
Input an integer: 25
Expected Output:
3
28
53
78

108. Write a C program that accepts some integers from the user and find the highest value and the input position.

Test Data :
Input 5 integers:
5

7
15
23
45
Expected Output:
Highest value: 45
Position: 5

109. Write a C program to print the numbers from the lowest to the highest (inclusive) and the sum of consecutive integers from a given pair of numbers.
Test Data :
Input a pair of numbers (for example 10,2):
Input first number of the pair: 10
Input second number of the pair: 2
Expected Output:
List of odd numbers: 3
5
7
9
Sum=24

110. Write a C program to check if two numbers in a pair is in ascending order or descending order.
Test Data :
Input a pair of numbers (for example 10,2 : 2,10):
Input first number of the pair: 10
Expected Output:
Input second number of the pair: 2
The pair is in descending order!

Week 4(Day 17-24)

111. Write a C program to find cube of any number using function.
112. Write a C program to find diameter, circumference and area of circle using functions.
113. Write a C program to find maximum and minimum between two numbers using functions.
114. Write a C program to check whether a number is even or odd using functions.
115. Write a C program to check whether a number is prime, Armstrong or perfect number using functions.
116. Write a C program to find all prime numbers between given interval using functions.
117. Write a C program to print all strong numbers between given interval using functions.
118. Write a C program to print all Armstrong numbers between given interval using functions.
119. Write a C program to print all perfect numbers between given interval using functions.
120. Write a C program to find power of any number using recursion.
121. Write a C program to print all natural numbers between 1 to n using recursion.
122. Write a C program to print all even or odd numbers in given range using recursion.
123. Write a C program to find sum of all natural numbers between 1 to n using recursion.
124. Write a C program to find sum of all even or odd numbers in given range using recursion.
125. Write a C program to find reverse of any number using recursion.
126. Write a C program to check whether a number is palindrome or not using recursion.
127. Write a C program to find sum of digits of a given number using recursion.
128. Write a C program to find factorial of any number using recursion.
129. Write a C program to generate nth Fibonacci term using recursion.
130. Write a C program to find GCD (HCF) of two numbers using recursion.

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131. Write a C program to find LCM of two numbers using recursion.
132. Write a C program to read and print elements of array. - using recursion.
133. Write a C program to print all negative elements in an array.
134. Write a C program to find sum of all array elements. - using recursion.
135. Write a C program to find maximum and minimum element in an array. - using recursion.
136. Write a C program to find second largest element in an array.
137. Write a C program to count total number of even and odd elements in an array.
138. Write a C program to count total number of negative elements in an array.
139. Write a C program to copy all elements from an array to another array.
140. Write a C program to insert an element in an array.
141. Write a C program to delete an element from an array at specified position.
142. Write a C program to count frequency of each element in an array.
143. Write a C program to print all unique elements in the array.
144. Write a C program to count total number of duplicate elements in an array.
145. Write a C program to delete all duplicate elements from an array.
146. Write a C program to merge two array to third array.
147. Write a C program to find reverse of an array.
148. Write a C program to put even and odd elements of array in two separate array.
149. Write a C program to search an element in an array.
150. Write a C program to sort array elements in ascending or descending order.
151. Write a C program to sort even and odd elements of array separately.
152. Write a C program to left rotate an array.
153. Write a C program to right rotate an array.
154. Write a C program to add two matrices.
155. Write a C program to subtract two matrices.
156. Write a C program to perform Scalar matrix multiplication.
157. Write a C program to multiply two matrices.
158. Write a C program to check whether two matrices are equal or not.
159. Write a C program to find sum of main diagonal elements of a matrix.
160. Write a C program to find sum of minor diagonal elements of a matrix.
161. Write a C program to find sum of each row and column of a matrix.
162. Write a C program to interchange diagonals of a matrix.
163. Write a C program to find upper triangular matrix.
164. Write a C program to find lower triangular matrix.
165. Write a C program to find sum of upper triangular matrix.
166. Write a C program to find sum of lower triangular matrix.
167. Write a C program to find transpose of a matrix.
168. Write a C program to find determinant of a matrix.
169. Write a C program to check Identity matrix.
170. Write a C program to check Sparse matrix.
171. Write a C program to check Symmetric matrix
172. Write a C program to create, initialize and use pointers.
173. Write a C program to add two numbers using pointers.
174. Write a C program to swap two numbers using pointers.
175. Write a C program to input and print array elements using pointer.
176. Write a C program to copy one array to another using pointers.
177. Write a C program to swap two arrays using pointers.
178. Write a C program to reverse an array using pointers.
179. Write a C program to search an element in array using pointers.
180. Write a C program to access two dimensional array using pointers.
181. Write a C program to add two matrix using pointers.

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182. Write a C program to multiply two matrix using pointers.
183. Write a C program to find length of string using pointers.
184. Write a C program to copy one string to another using pointers.
185. Write a C program to concatenate two strings using pointers.
186. Write a C program to compare two strings using pointers.
187. Write a C program to find reverse of a string using pointers.
188. Write a C program to sort array using pointers.
189. Write a C program to return multiple value from function using pointers.
190. Write a C program to read a password until it is correct. For wrong password print "Incorrect password" and for correct password print "Correct password" and quit the program. The correct password is 1234.
Test Data :
Input the password: 1234
Expected Output:
Correct password

191. Write a C program to read the coordinates(x, y) (in Cartesian system) and find the quadrant to which it belongs (Quadrant -I, Quadrant -II, Quadrant -III, Quadrant -IV).
Note: A Cartesian coordinate system is a coordinate system that specifies each point uniquely in a plane by a pair of numerical coordinates.
These are often numbered from 1st to 4th and denoted by Roman numerals: I (where the signs of the (x,y) coordinates are I(+,+), II (−,+), III (−,−), and IV (+,−).
Test Data :
Input the Coordinate(x,y):
x: 25
y: 15
Expected Output:
Quadrant-I(+,+)

192. Write a program that reads two numbers and divide the first number by second number. If the division not possible print "Division not possible".
Test Data :
Input two numbers:
x: 25
y: 5
Expected Output: 5.0

193. Write a C program to calculate the sum of all number not divisible by 17 between two given integer numbers.
Test Data :
Input the first integer: 50 Input the second integer: 99
Expected Output:
Sum: 3521

194. Write a C program to find all numbers which dividing it by 7 and the remainder is equal to 2 or 3 between two given integer numbers.
Test Data :
Input the first integer: 25
Input the second integer: 45
Expected Output:
30
31

13

37
38
44

195. Write a C program to print 3 numbers in a line, starting from 1 and print n lines. Accept number of lines (n, integer) from the user.

Test Data :
Input number of lines: 5
Expected Output:
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15

196. Write a C program to print a number, it's square and cube in a line, starting from 1 and print n lines. Accept number of lines (n, integer) from the user.

Test Data :
Input number of lines: 5
Expected Output:
1 1 1
2 4 8
3 9 27
4 16 64
5 25 125

197. Write a C program that reads two integers p and q, print p number of lines in a sequence of 1 to b in a line.

Test Data :
Input number of lines: 5
Number of characters in a line: 6
Expected Output:
1 2 3 4 5 6
7 8 9 10 11 12
13 14 15 16 17 18
19 20 21 22 23 24
25 26 27 28 29 30

198. Write a C program to calculate the average marks of mathematics of some students. Input 0 (excluding to calculate the average) or negative value to terminate the input process.

Test Data :
Input Mathematics marks (0 to terminate): 10
15
20
25
0
Expected Output:
Average marks in Mathematics: 17.50

199. Write a C program to calculate the value of S where S = 1 + 1/2 + 1/3 + ... + 1/50.

Expected Output:

Value of S: 4.50

200. Write a C program to calculate the value of S where S = 1 + 3/2 + 5/4 + 7/8.
Expected Output:
Value of series: 4.62

201. Write a C program that reads an integer and find all its divisor.
Test Data:
Input an integer: 45
Expected Output:
All the divisor of 45 are:
1
3
5
9
15
45

202. Write a C program to read and print the elements of an array of length 7, before print replace every negative number, zero with 100.
Test Data:
Input the 5 members of the array:
25
45
35
65
15

Expected Output:
Array values are:
n[0] = 25
n[1] = 45
n[2] = 35
n[3] = 65
n[4] = 15

203. Write a C program to read and print the elements of an array of length 7, before print, put the triple of the previous position starting from the second position of the array.
For example, if the first number is 2, the array numbers must be 2, 6, 18, 54 and 162
Test Data:
Input the first number of the array: 5
Expected Output:
n[0] = 5
n[1] = 15
n[2] = 45
n[3] = 135
n[4] = 405

204. Write a C program to read an array of length 5 and print the position and value of the array elements of value less than 5.
Test Data:

Input the 5 members of the array:
15
25
4
35
40
Expected Output:
A[2] = 4.0

205. Write a C program to read an array of length 6, change the first element by the last, the second element by the fifth and the third element by the fourth. Print the elements of the modified array.
Test Data:
Input the 5 members of the array:
15
20
25
30
35

Expected Output:
array_n[0] = 35
array_n[1] = 30
array_n[2] = 25
array_n[3] = 20
array_n[4] = 15

Week 5(Day 25-31)

206. Write a C program to find length of a string.
207. Write a C program to copy one string to another string.
208. Write a C program to concatenate two strings.
209. Write a C program to compare two strings.
210. Write a C program to convert lowercase string to uppercase.
211. Write a C program to convert uppercase string to lowercase.
212. Write a C program to toggle case of each character of a string.
213. Write a C program to find total number of alphabets, digits or special character in a string.
214. Write a C program to count total number of vowels and consonants in a string.
215. Write a C program to count total number of words in a string.
216. Write a C program to find reverse of a string.
217. Write a C program to check whether a string is palindrome or not.
218. Write a C program to reverse order of words in a given string.
219. Write a C program to find first occurrence of a character in a given string.
220. Write a C program to find last occurrence of a character in a given string.
221. Write a C program to search all occurrences of a character in given string.
222. Write a C program to count occurrences of a character in given string.
223. Write a C program to find highest frequency character in a string.
224. Write a C program to find lowest frequency character in a string.
225. Write a C program to count frequency of each character in a string.
226. Write a C program to remove first occurrence of a character from string.
227. Write a C program to remove last occurrence of a character from string.
228. Write a C program to remove all occurrences of a character from string.

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229. Write a C program to remove all repeated characters from a given string.
230. Write a C program to replace first occurrence of a character with another in a string.
231. Write a C program to replace last occurrence of a character with another in a string.
232. Write a C program to replace all occurrences of a character with another in a string.
233. Write a C program to find first occurrence of a word in a given string.
234. Write a C program to find last occurrence of a word in a given string.
235. Write a C program to search all occurrences of a word in given string.
236. Write a C program to count occurrences of a word in a given string.
237. Write a C program to remove first occurrence of a word from string.
238. Write a C program to remove last occurrence of a word in given string.
239. Write a C program to remove all occurrence of a word in given string.
240. Write a C program to trim leading white space characters from given string.
241. Write a C program to trim trailing white space characters from given string.
242. Write a C program to trim both leading and trailing white space characters from given string.
243. Write a C program to remove all extra blank spaces from given string.
244. Write a C program to read an array of length 6 and find the smallest element and its position.

Test Data:
Input the length of the array: 5 Input the array elements:
25
35
20
14
45
Expected Output:
Smallest Value: 14
Position of the element: 3

245. Write a C program that accepts principle, rate of interest, time and compute the simple interest.

Test Data:
Input Data: p = 10000, r = 10% , t = 12 year
Expected Output:
Input principle, Rate of interest & time to find simple interest:
Simple interest = 12000

246. Write a C program that accepts a distance in centimeters and prints the corresponding value in inches.

Test Data:
Input Data: 500cms
Input the distance in cm:
Distance of 500.00 cms is = 196.85 inches

247. Write a C program that swaps two numbers without using third variable.

Input value for x & y:
Before swapping the value of x & y: 5 7
After swapping the value of x & y: 7 5

248. Write a C program to shift given data by two bits to the left.

Input value : 2
Read the integer from keyboard.
Integer value = 2
The left shifted data is = 16

249. Write a C program to reverse and print a given number.
Input a number:
The original number = 234
The reverse of the said number = 432

250. Write a C program that accepts 4 real numbers from the keyboard and print out the difference of the maximum and minimum values of these four numbers.
Input four numbers: 1.54 1.236 1.3625 1.002
Difference is 0.5380

251. Write a C program to display sum of series 1 + 1/2 + 1/3 + ... + 1/n.
Input any number: 1 + 1/0
Sum = 1/0

252. Write a C program to create enumerated data type for 7 days and display their values in integer constants.
Sun = 0
Mon = 1
Tue = 2
Wed = 3
Thu = 4
Fri = 5
Sat = 6

253. Write a C program that accepts a real number x and prints out the corresponding value of sin(1/x) using 4-decimal places.
Input value of x: .6235
Value of sin(1/x) is 0.9995

254. Write a C program that accepts a positive integer less than 500 and prints out the sum of the digits of this number.
Input a positive number less than 500:
Sum of the digits of 347 is 14

255. Write a C program that accepts a positive integer n less than 100 from the user and prints out the sum 14 + 24 + 44 + 74 + 114 + • • • + m4 , where m is less than or equal to n. Print appropriate message.
Input a positive number less than 100: 68
Sum of the series is 37361622

256. Write a C program that accepts integers from the user until a zero or a negative number, display the number of positive values, the minimum value, the maximum value and the average of all numbers.
Input a positive integer:
Input next positive integer: 15
Input next positive integer: 25
Input next positive integer: 37
Input next positive integer: 43
Number of positive values entered is 4
Maximum value entered is 43
Minimum value entered is 15
Average value is 30.0000

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257. Write a C program that prints out the prime numbers between 1 and 200. The output should be such that each row contains a maximum of 20 prime numbers.

Expected output:

The prime numbers between 1 and 199 are:
2 3 5 7 11 13 17 19 23 29
31 37 41 43 47 53 59 61 67 71
73 79 83 89 97 101 103 107 109 113
127 131 137 139 149 151 157 163 167 173
179 181 191 193 197

258. Write a C program that generates 50 random numbers between -0.5 and 0.5 and writes them in a file rand.dat. The first line of ran.dat contains the number of data and the next 50 lines contains the 50 random numbers.

50
-0.4215
0.2620
0.3065
-0.0485
.... 0.3980
0.1750
0.4780
-0.2915
0.0715
0.3565

259. Write a C program to evaluate the equation y=xn when n is a non-negative integer.

Input the values of x and n: 256
x=256.000000; n=0;
x to power n=1.000000

260. Write a C program to print the powers of 2 table for the power 0 to 10, both positive and negative.

```
========================================
n 2 to power n 2 to power -n
========================================
0 1 1.000000000000
1 2 0.500000000000
2 4 0.250000000000
3 8 0.125000000000
4 16 0.062500000000
5 32 0.031250000000
6 64 0.015625000000
7 128 0.007812500000
8 256 0.003906250000
9 512 0.001953125000
10 1024 0.000976562500
========================================
```

Week 6(Day 32-37)

261. Store Information of 10 Students Using Structure

262. C Program to Store Information of Students Using Structure

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263. Store Information(name, Id and salary) of a Employee Using Structure
264. C Program to Store Information Using Structures with Dynamically Memory Allocation
265. Store Information(name, roll and marks) of a Student Using Structure
266. Write a C program to create a file and write contents, save and close the file.
267. Write a C program to read file contents and display on console.
268. Write a C program to read numbers from a file and write even, odd and prime numbers to separate file.
269. Write a C program to append content to a file.
270. Write a C program to compare two files.
271. Write a C program to copy contents from one file to another file.
272. Write a C program to merge two file to third file.
273. Write a C program to count characters, words and lines in a text file.
274. Write a C program to remove a word from text file.
275. Write a C program to remove specific line from a text file.
276. Write a C program to remove empty lines from a text file.
277. Write a C program to find occurrence of a word in a text file.
278. Write a C program to count occurrences of a word in a text file.
279. Write a C program to count occurrences of all words in a text file.
280. Write a C program to find and replace a word in a text file.
281. Write a C program to replace specific line in a text file.
282. Write a C program to print source code of same program.
283. Write a C program to convert uppercase to lowercase character and vice versa in a text file.
284. Write a C program to find properties of a file using stat() function.
285. Write a C program to check if a file or directory exists.
286. Write a C program to rename a file using rename() function.
287. Write a C program to list all files and sub-directories recursively.
288. Write a C program to print a binomial coefficient table.

Mx 0 1 2 3 4 5 6 7 8 9 10

---

0 1
1 1 1
2 1 2 1
3 1 3 3 1
4 1 4 6 4 1
5 1 5 10 10 5 1
6 1 6 15 20 15 6 1
7 1 7 21 35 35 21 7 1
8 1 8 28 56 70 56 28 8 1
9 1 9 36 84 126 126 84 36 9 1
10 1 10 45 120 210 252 210 120 45 10 1

289. Write a C program to print the alphabet set in decimal and character form.

[65-A] [66-B] [67-C] [68-D] [69-E] [70-F] [71-G] [72-H] [73-I] [74-J] [75-K] [76-L] [77-M] [78-N] [79-O] [80-P] [81-Q]
[82-R] [83-S] [84-T] [85-U] [86-V] [87-W] [88-X] [89-Y]
[90-Z] [97-a] [98-b] [99-c] [100-d] [101-e] [102-f] [103-g] [104-h] [105-i] [106-j] [107-k] [108-l] [109-m] [110-n]
[111-o] [112-p] [113-q] [114-r] [115-s] [116-t] [117-u] [118-v]
[119-w] [120-x] [121-y] [122-z]

290. Write a C program to copy a given string into another and count the number of characters copied.

Input a string
Original string: w3resource
Number of cnaracters = 10

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291. Write a C program to remove any negative sign in front of a number.
Input a value (negative):
Original value = -253
Absolute value = 253

292. Write a C programming that reads in two integers and check whether the first integer is a multiple of the second integer.
Sample Input: 9 3
Sample Output:
Input the first integer : Input the second integer:
9 is a multiple of 3.

293. Write a C programming to display the integer equivalents of letters (a-z, A-Z).
Sample Output:
List of integer equivalents of letters (a-z, A-Z).
==========
97 98 99 100 101 102
103 104 105 106 107 108
109 110 111 112 113 114
115 116 117 118 119 120
121 122 32 65 66 67
68 69 70 71 72 73
74 75 76 77 78 79
80 81 82 83 84 85
86 87 88 89 90

294. Write a C programming that accepts one seven-digit number and separates the number into its individual digits, and prints the digits separated from one another by two spaces each.
Sample Input: 2345678
Input a seven digit number:
Output: 2 3 4 5 6 7 8

295. Write a C programming to calculate and prints the squares and cubes of the numbers from 0 to 20 and uses tabs to display them in a table of values.
Sample Output:
Number Square Cube
==========
0 0 0
1 1 1
2 4 8
3 9 27
....
18 324 5832
19 361 6859
20 400 8000

296. Write a C programming that accepts principal amount, rate of interest and days for a loan and calculate the simple interest for the loan, using the following formula.
interest = principal * rate * days / 365.
Sample Input:

10000
.1
365
0
Sample Output:
Input loan amount (0 to quit): Input interest rate: Input term of the loan in days: The interest amount is $1000.00
Input loan principal_amt (0 to quit):

297. Write a C programming to demonstrates the difference between predecrementing and postdecrementing using the decrement operator --.

Sample Output:
Predecrementing:
x = 10
x-- = 10
x = 9

298. Write a C programming using looping to produce the following table of values.

Sample Output:

```
x    x+2   x+4   x+6
-----------------------------
1    3     5     7
4    6     8     10
7    9     11    13
10   12    14    16
13   15    17    19
```

299. Write a C programming that reads the side (side sizes between 1 and 10) of a square and prints square using hash (#) character.

Sample Input: 10
Sample Output:
Input the size of the square:

```
##########
##########
##########
##########
##########
##########
##########
##########
##########
##########
```

300. Write a C programming that reads the side (side sizes between 1 and 10) of a square and prints a hollow square using hash (#) character.

Sample Input: 10
Sample Output:
Input the size of the square:

```
##########
#        #
#        #
```

92

```
#     #
#     #
#     #
#     #
#     #
#     #
##########
```

301. Write a C programming Write a program that reads in a five-digit integer and determines whether or not it's a palindrome.
Sample Input: 33333
Sample Output:
Input a five-digit number: 33333 is a palindrome.

302. Write a C programming which reads an integer (7 digits or fewer) and count number of 3s in the given number.
Sample Input: 538453
Sample Output:
Input a number: The number of threes in the said number is 2

303. Write a C programming to calculate and print the average of some integers. Accept all the values preceding 888.
Sample Input:12
15
24
888
Sample Output:
Input each number on a separate line (888 to exit):
The average value of the said numbers is 17.000000

304. Write a C programming to print a table of all the Roman numeral equivalents of the decimal numbers in the range 1 to 50.
Sample Output:

```
Decimal  Roman
number   numeral
-----------------
1        I
2        II
3        Iii
4        IV
.....
98       LXXXXVIII
99       LXXXXIX
100      C
```