Code with Redoy
C++[OOP] Problem-solving Sheet || **250 Problems** with Solution code and Tutorials

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Basic Problems (18 Problems)

1. Write a program to print your name, date of birth, and mobile number.

```cpp
#include <iostream>
using namespace std;
int main(){

   cout<<"Md Fuadul Islam Redoy";
   cout<<"\n5 April 2000";
   cout<<"\nPhone Number : +8801236987";

   return 0;
}
```

2. Write a program to enter two numbers and perform all arithmetic operations.

```cpp
#include<bits/stdc++.h>
using namespace std;

class Calculation{
    public:
    int n1,n2;

    void InputDta(){
        cout<<"Enter Two Numbers = ";
        cin>>n1>>n2;
    }

    void Add(){
        int sum = n1 + n2;
        cout<<"\nSum of two numbers = "<<sum<<endl;
    }

    void sub(){
        int sub = n1 - n2;
        cout<<"Subtraction of two numbers = "<<sub<<endl;
    }

    void mul(){
        int mul = n1 * n1;
        cout<<"Multiplication of two numbers = "<<mul<<endl;
    }

    void div(){
        float div = n1 / n2;
```

```
        cout<<"Division of two numbers = "<< fixed <<
setprecision(2) << div<<endl;
    }
};

int main()
{
    Calculation result;

    result.InputDta();
    result.Add();
    result.sub();
    result.mul();
    result.div();

    return 0;
}
```

3. Write a program to enter the length, and breadth of a rectangle and find its perimeter and area.

```
#include<iostream>
using namespace std;

class Rectangle{
    public:
    int length,breadth;

    void InputData(){
        cout<<"Enter The Length & Breadth of The Rectangle =
";
        cin>>length>>breadth;
    }

    void Area(){
        int area = length * breadth;
        cout<<"Area = "<<area<<endl;
    }

    void Perimeter(){
        int perimeter = 2*(length + breadth);
        cout<<"Perimeter = "<<perimeter<<endl;
    }
};

int main()
{
    Rectangle Result;
```

```
    Result.InputData();
    Result.Area();
    Result.Perimeter();

    return 0;
}
```

4. Write a Program to calculate the area of an equilateral triangle.

```
#include<iostream>
#include<cmath>
using namespace std;

class Area{
    public:
    int a;
    float area;

    void Input(){
        cout<<"Enter the value of a = ";
        cin>>a;
    }

    void Calculate(){
        area = ((sqrt(3)/4) * (a * a));
        cout<<"\nArea Of Equilateral Triangle = "<<area;
    }
};

int main()
{
    Area res;
    res.Input();
    res.Calculate();

    return 0;
}
```

5. Write a program to calculate the perimeter and area of a circle with a given radius.

```
#include<iostream>
using namespace std;
```

```
class calculate{
    public:
    float r = 5, area, perimeter;

    void Area(){
        area = 3.1416 * r * r;
        cout<<"\nArea Of The Circle = "<<area<<endl;
    }
    void Perimeter(){
        perimeter = 2 * 3.1416 * r;
        cout<<"Perimeter Of The Circle = "<<perimeter;
    }

};

int main()
{
    calculate Result;
    Result.Area();
    Result.Perimeter();

    return 0;
}
```

6. Write a program to find the third angle of a triangle if two angles are given.

```
#include<bits/stdc++.h>
using namespace std;

class machine{
    public:
    int angle1, angle2, angle3;

    void Input(){
        cout<<"Enter The First Angle Of Your Trigle = ";
        cin>>angle1;
        cout<<"Enter The Second Angle Of Your Trigle = ";
        cin>>angle2;
    }

    void Calculation(){
        angle3 = 180 - (angle1 + angle2);
        cout<<"\nThe Third Angle Of Your Tringle = "<<angle3;
    }

};

int main()
```

```
{
    machine Result;
    Result.Input();
    Result.Calculation();

    return 0;
}
```

7. Write a program that converts Centigrade to Fahrenheit.

```
//Write a Program to enter P, T, and R and calculate compound
interest.
#include<bits/stdc++.h>
#include<cmath>
using namespace std;

class CompundInterest{
    public:
    float p,t,r,ci;

    void InputData(){
        cout<<"Enter The value of P ,T and R = ";
        cin>>p>>t>>r;
    }

    void CalculateData(){
        ci = p * (pow ((1 + r/100 ), t));
    }

    void ShowData(){
        cout<<"\nYour Compund Interest is = "<< fixed
<<setprecision(2) <<ci<<endl;
        cout<<"Your Total Amount With Compund Interest is =
"<< fixed <<setprecision(2) <<ci+p<<endl;
    }

};

int main()
{
    CompundInterest Result;
    Result.InputData();
    Result.CalculateData();
    Result.ShowData();

    return 0;
}
```

8. Write a program that converts Fahrenheit to Centigrade.

```
//Write a program that converts Fahrenheit to Centigrade.
#include<bits/stdc++.h>
using namespace std;

class machine{
    public:
    float Centigrade,Fahrenheit;

    void Input(){
        cout<<"Enter the value of fahrenheit = ";
        cin>>Fahrenheit;
    }

    void output(){
        Centigrade = (Fahrenheit - 32.0) * (5.0/9.0);
        cout<<"The value of centigrade = "<< Centigrade <<"
C"<<endl;
    }
};

int main(){
    machine Result;
    Result.Input();
    Result.output();

    return 0;
}
```

9. Write a Program to enter marks of five subjects and calculate the total, average, and percentage.

```cpp
//Write a Program to enter marks of five subjects and
calculate the total, average, and percentage.

#include<bits/stdc++.h>
using namespace std;

class Subjects{
    public:
    float phy, math, chem, bio, ict, total, average, per;

    void Input(){
        cout<< "Enter the marks of all subject = ";
        cin >> phy >> math >> bio >> chem >> ict;
    }
    void Calculation()
    {
        total = phy + math + chem + bio + ict;
        average = (phy + math + chem + bio + ict) / 5;
        per = (total / 500) * 100;
    }
    void output(){
        cout << "Total number = " << total;
        cout << "\nAverage number = " << average;
        cout << "\nPercentage = " << per;
    }

};

int main()
{
    Subjects Result;
    Result.Input();
    Result.Calculation();
    Result.output();

    return 0;
}
```

10. Write a Program to enter P, T, and R and calculate simple interest.

```cpp
//Write a Program to enter P, T, and R and calculate compound
interest.
#include<bits/stdc++.h>
#include<cmath>
using namespace std;
```

```
class CompundInterest{
    public:
    float p,t,r,ci;

    void InputData(){
        cout<<"Enter The value of P ,T and R = ";
        cin>>p>>t>>r;
    }

    void CalculateData(){
        ci = p * (pow ((1 + r/100 ), t));
    }

    void ShowData(){
        cout<<"\nYour Compund Interest is = "<< fixed
<<setprecision(2) <<ci<<endl;
        cout<<"Your Total Amount With Compund Interest is =
"<< fixed <<setprecision(2) <<ci+p<<endl;
    }

};

int main(){
    CompundInterest Result;

    Result.InputData();
    Result.CalculateData();
    Result.ShowData();

    return 0;
}
```

11. Write a Program to enter P, T, and R and calculate compound interest.

12. Write a Program that takes minutes as input and displays the total number of hours and minutes.

13. Write a program that reads a first name, last name, and year of birth and displays the names and the year one after another sequentially.

14. Write a program to convert specified days into years, weeks and the rest of the days.

15. Write a program that accepts an employee's ID, totally worked hours of a month, and the amount he received per hour. Print the employee's ID and salary for a particular month.

16. Write a program to find the power of any number x ^ y.

17. Write a program to enter any number and calculate its square root.

18. Write a program to calculate a bike’s total consumption from the given total distance (integer value) traveled (in km) and spent fuel (in liters, float number – 2 decimal points.

সবগুলো প্রবলেমের সলুশন কোড এবং ভিডিও টিউটোরিয়াল পেতে প্রিমিয়াম ভার্সন পারচেজ করতে হবে।

প্রিমিয়াম ভার্সনের দাম এবং পারচেজ লিংক

প্রিমিয়াম ভার্সন পারচেজ করার পর আপনাকে Private What's App গ্রুপে এড্ড করা হবে যেখানে আপনি প্রতি প্রবলেম নিয়ে একজন দক্ষ মেন্টরের সাথে সরাসরি কথা বলতে পারবেনক। আর কী লাগে ভাই?!

If-Else (25 Problems)

19. Write a program to find the maximum between two numbers.

20. Write a program to find the maximum between three numbers.

21. Write a program to check whether a number is even or odd.

22. Write a program to enter the week number and print the day of the week.

23. Write a program to check whether a number is negative or positive or zero.

24. Write a program to check whether a number is divisible by 5 or 11 or not.

25. Write a program to input any character and check whether it is the alphabet, digit, or special character.

26. Write a program to check whether you are eligible to make a NID Card or not.

27. Write a program to check whether the year is a leap year or not.

28. Your younger brother studied in a primary school. He is fluent in the English alphabet. But he doesn't know about the vowels and consonants. Your mother assigns you to teach him to know about which alphabets are vowels and consonants. So you are going to make a program (using else if ladder) where your brother writes any alphabet and your program will tell him that it is a vowel or consonant.

29. Write a program to check whether the character is an alphabet or not.

30. Write a program to check the uppercase or lowercase alphabet.

31. Write a program to input the week number and print the weekday.

32. Write a program to input the month number and print the number of days in that month.

33. Write a program to check two integers whether they are equal or not.

34. Write a program to input the angles of a triangle and check whether a triangle is valid or not.

35. Write a program to check whether the triangle is an equilateral, isosceles, or scalene triangle.

36. Write a program to find all roots of a quadratic equation.

37. Your younger brother studied in a primary school. He is fluent in the English alphabet. But I don't know about the vowels and consonants. Your mother assigns you to teach him to know about which alphabets are vowels and consonants.

38. So you are going to make a program (using else if ladder) where your brother writes any alphabet and your program will tell him that it is a vowel or consonant.

39. Write a program to find the eligibility for admission to a professional course base on the following criteria:

    Marks in MATHS >= 65
    Marks in PHY >= 55
    Marks in CHEM >= 50
    Total in all three subjects => 180
    Or,
    Total in Math and physics >=140.

40. Write a program to read the temperature in centigrade and display a suitable message according to the temperature state below:
    Temp < 0 then Freezing weather
    Temp 0-10 then very cold weather
    Temp 10-20 then cold weather
    Temp 20-30 then Normal in Temp
    Temp 30-40 then it's hot
    Temp >=40 then it's very hot.

41. Write a program to read four values a, b, c, and d from the terminal and evaluate the value of (a+b) to (c-d), and print the result, if c-d is not equal to zero.

42. Write a program to input the basic salary of an employee and calculate its Gross salary according to the following:
    Basic Salary <= 10000 : HRA = 20%, DA = 80%
    Basic Salary <= 20000 : HRA = 25%, DA = 90%
    Basic Salary > 20000 : HRA = 30%, DA = 95%.

43. Write a program to input electricity unit charges and calculate the total electricity bill according to the given condition:
    For the first 50 units Rs. 0.50/unit
    For the next 100 units Rs. 0.75/unit
    For the next 100 units Rs. 1.20/unit
    For units above 250 Rs. 1.50/unit
    An additional surcharge of 20% is added to the bill.

Switch (9 Problems)

44. Write a program to print the day of the week name using a switch case.

45. Write a program to print the total number of days in a month using a switch case.

46. Write a program to check whether an alphabet is a vowel or consonant using a switch case.

47. Write a program to find the maximum between two numbers using a switch case.

48. Write a program to check whether a number is even or odd using a switch case.

49. Write a program to check whether a number is positive, negative, or zero using a switch case.

50. Write a program to find the roots of a quadratic equation using a switch case.

51. Write a program to create a Simple Calculator using a switch case.

52. Write a program that takes the integer number of a student and finds out the grade using a switch case statement following the grading system.
    A = 90-100
    B+ = 87-89
    B = 84-86
    B- = 80-83
    C+ = 77-79
    C = 74-76
    C- = 70-73
    D+ = 65-69
    D = 60-64
    F = Below 60

Loop (41 Problems)

53. Write a program to Print your name 20 times using a for loop, while loop and do while loop.

54. Write a program to print 1-10 using a for loop, while loop and do while loop.

55. Write a program to Calculate the Sum of 1 to 10 numbers using a for loop, while loop and do while loop.

56. Write an infinite loop. An infinite loop never ends. Condition is always true.

57. Write a program to print even numbers up to N.

58. Write a program to print odd numbers up to N.

59. Write a program to find the sum of all natural numbers between 1 to n.

60. Write a program to find the sum of all even numbers between 1 to n.

61. Write a program to print all natural numbers in reverse (from n to 1).

62. Write a program to print those numbers from 1 to 100 which are divisible by 7.

63. Write a program to print all alphabets from a to z.

64. Write a program to count the number of digits in a number.

65. Write a program to find the last digit of a given number.

66. Write a program to find the first digit of a given number.

67. Write a program to find the sum of the first and last digits of a number.

68. Write a program to swap the first and last digits of a number.

69. Write a program to calculate the sum of the digits of a number.

70. Write a program to calculate the product of the digits of a number.

71. Write a program to enter a number and print its reverse.
e.x. The number 12345 should be written as 54321.

72. Write a program to check whether a number is a palindrome or not.

73. Write a program to find the frequency of each digit in a given integer.

74. Write a program to print the multiplication table of any number.

75. Write a program to enter a number and print it in words.

76. Write a program to print all ASCII characters with their values.

77. Write a program to find the power of a number using for loop.

78. Write a program to find all factors of a number.

79. Write a program to calculate the factorial of a number.

80. Write a program to find the HCF (GCD) and LCM of two numbers.

81. Write a program to check whether a number is a Prime number or not.

82. Write a program to find the sum of all prime numbers between 1 to n.

83. Write a program to find all prime factors of a number.

84. Write a program to check whether a number is an Armstrong number or not.

85. Write a program to print all Armstrong numbers between 1 to n.

86. Write a program to check whether a number is a Perfect number or not.

87. Write a program to print all Perfect numbers between 1 to n.

88. Write a program to check whether a number is a Strong number or not.

89. Write a program to print all Strong numbers between 1 to n.

90. Write a program to print the Fibonacci series up to n terms.

91. Write a program to check whether a number is a spy number or not.

92. Write a program to print the spy numbers up to N.

1D (29 Problems)

93. Write a program to read and print elements of an array.

94. Write a program to insert an element in an array.

95. Write a program to calculate the sum of 5 numbers using an array.

96. Write a program to calculate the sum of 5 numbers using an array (Numbers should be taken from the user).

97. Write a program to calculate the sum and average of N numbers using an array.

98. Write a program to find the maximum and minimum elements in an array.

99. Write a program to print the positive and negative numbers of an array.

100. Write a program to copy all elements from an array to another array.

101. Write a program to sort all the elements of an array and find the largest element from that array.

102. Write a program to find the largest element in an array.

103. Write a program to find the second largest element in an array.

104. Write a program to count the total number of negative, even, and odd numbers in an array.

105. Write a program to delete an element from an array at a specified position.

106. Write a program to count the frequency of each element in an array.

107. Write a program to print all unique elements in the array.

108. Write a program to count the total number of duplicate elements in an array.

109. Write a program to delete all duplicate elements from an array.

110. Write a program to merge two arrays to a third array.

111. Write a program to find the reverse of an array.

112. Write a program to put the even and odd elements of an array in two separate arrays.

113. Write a program to search for an element in an array.

114. Write a program to sort array elements in ascending or descending order.

115. Write a program to sort even and odd elements of an array separately.

116. Write a program to the left rotate an array.

117. Write a program to right rotate an array.

118. Suppose you have an Array with the size of 10. Your program will input all the array elements from the user. Now using a loop, traverse the array. During traversing, if the array contains an odd

number in the odd index, take the odd value from that odd index from the array and make the summation of those numbers and replace that index value with 0. Print the summation and the array. The given sample is for your understanding. You must use your own sample.
Example:
Before the operation:

Index	1	2	3	4	5	6	7	8	9	10
Elements	1	3	6	5	7	9	11	8	3	8

After the operation:
Elements:

Elements	0	3	6	5	0	9	0	8	0	8

Summation = 22

119. The scenario in front of any virtual Bank is like Men and women standing in a single line. It looks so bad. Now separate men and women into different two line that looks like a gentle management system and develop the above program to find the majority of gender in the line.

M = male
W = Women

Disarranged line scenario is like - M M W W M M M M W M

M	M	W	W	M	M	M	M	W	M

After operation:

M	M	M	M	M	M	M

W	W	W

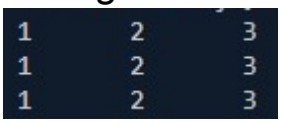
120. There's a list of numbers in a row on the table. Your teacher is telling a number which is the addition of any of the two numbers from the given number list on the table. Your job is to find two numbers whose addition is equal to the number given by your teacher. If there's no pair of numbers in a list that is equal to the given number by your teacher, then you will say "Sir, there's no pair of numbers equal to your number" otherwise you will show that two numbers which addition is equal to the given number by your teacher. Write a program to solve the situation.

121. Suppose you have taken some values in an array of any size. For example, array1 = [5, 2, 3, 1, 9, 4]. Now your friend requests you to shift array values one cell to the right side (Right Shift). As per the request of your friend, array 1 will be now [4, 5, 2, 3, 1, 9]. Now write a C program to satisfy the request of your friend by choosing an appropriate technique to shift the array values to the right.

Note: The array values and size will be defined by the user. Sample Input: 9 3 8 2 7 1
Sample Output: 1 9 3 8 2 7

2D Array (17 Problems)

122. Write a program to print a 2D Array or a matrix like the given below.



123. Write a program to take input from the user of a 2D Array or a matrix.

124. Write a program to add, subtract and multiply two matrices.

125. Write a program to perform Scalar matrix multiplication.

126. Write a program to check whether two matrices are equal or not and find the multiply of that two matrices.

127. Write a program to find the sum of the main diagonal elements of a matrix.

128. Write a program to find the sum of minor diagonal elements of a matrix.

129. Write a program to find the sum of each row and column of a matrix.

130. Write a program to interchange diagonals of a matrix.

131. Write a program to find the upper triangular matrix.

132. Write a program to find a lower triangular matrix.

133. Write a program to find the sum of the upper and lower triangular matrix.

134. Write a program to find the transpose of a matrix.

135. Write a program to find the determinant of a matrix.

136. Write a program to check the Identity matrix.

137. Write a program to check Sparse matrices.

138. Write a program to check Symmetric matrices.

Pattern (16 Problems)

139. Write a program to print the Square star pattern.

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

140. Write a program to print the Right Triangle Star pattern.

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

141. Write a program to make a pattern like below:

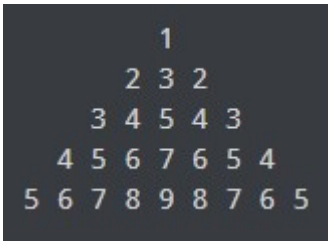
142. Write a program to make a pattern like given below:

143. Write a program to print the Pyramid Star Pattern.

144. Write a program to display the pattern like a right angle triangle with a number.

```
1
1 2
1 2 3
1 2 3 4
```

145.



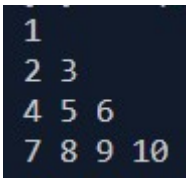
146.

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

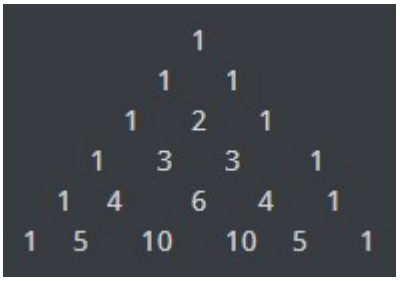
147. Write a program to make such a pattern as a right-angle triangle with a number that will repeat a number in a row.
The pattern is like

```
1
2 2
3 3 3
4 4 4 4
```

148. Write a program to make such a pattern like a right angle triangle with the number increased by 1.



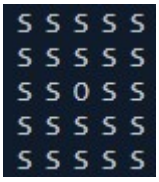
149. Print Pascal's Triangle



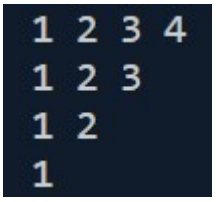
150. Write a program to make such a pattern as a pyramid with a number that will repeat the number in the same row.

```
   1
  2 2
 3 3 3
4 4 4 4
```

151. Write a program to make a pattern like the below:



152. Write a program to make a pattern like the below:



153. Write a program to make a pattern like the below:

```
A
B B
C C C
D D D D
E E E E E
```

154. Write a program to print the pattern like below(Row number should be odd and between 3 to 49).

```
\***/
*\*/*
**X**
*/*\*
/***\
```

Series (30 Problems)

155. 1 + 2 + 3 + 4 + 5 + 6 =?

156. 1 + 2 + 3 + 4 + 5 + 6 + …… + 20 =?

157. 1 + 2 + 3 + 4 + 5 + …… + N = ? (Use for loop)

158. 1 + 2 + 3 + 4 + 5 + …… + N = ?(without loop)

159. Write a program to find the summation between 10 to 50 using a for loop.

160. Write a program to find the summation between 10 to 50 without any loop.

161. 2 + 4 + 6 + …… + 10 = ?

162. 2 + 4 + 6 + …… + N = ? (Use for loop)

163. 2 + 4 + 6 + …… + N = ?(without loop)

164. Write a program to find the summation of even numbers between 10 to 50 by any loop.

165. Write a program to find the summation of even numbers between 10 to 50 without any loop.

166. 1 + 3 + 5 + …… + 9 = ?

167. 1 + 3 + 5 + …… + N = ? (Use for loop)

168. 1 + 3 + 5 + …… + N = ?(without loop)

169. Write a program to find the summation of odd numbers between 10 to 50 by any loop.

170. Write a program to find the summation of odd numbers between 10 to 50 without any loop.

171. $1^2 + 2^2 + 3^2 = ?$

172. $1^2 + 2^2 + 3^2 + \ldots\ldots\ldots\ldots\ldots\ldots + N^2 = ?$

173. 1 + 1/2 + 1/3 + 1/4 + 1/5 ... 1/n = ?
Test Data:
Input the number of terms: 5
Expected Output:
1/1 + 1/2 + 1/3 + 1/4 + 1/5 +
Sum of Series up to 5 terms: 2.283334

174. 9 + 99 + 999 + 9999 ……. =?
Test Data:
Input the number of terms:5
Expected Output:
9 99 999 9999 99999
The summation of the series = 111105

175. Find the sum of the first 10 terms of the arithmetic series: 3, 7, 11, 15, ...

176. Find the sum of the first 5 terms of the geometric series: 2, 4, 8, 16, ...

177. Find the nth term of the arithmetic series: 5, 8, 11, 14, ...

178. Find the sum of the first 12 terms of the series: 1/2, 2/3, 3/4, 4/5, ...

179. Find the sum of the infinite series: 1/2 + 1/4 + 1/8 + 1/16 + ...

180. Find the sum of the first 10 terms of the series: 1 + 4 + 9 + 16 + ...

181. Find the nth term of the geometric series: 3, 6, 12, 24, ...

182. Find the sum of the first 20 terms of the series: 2, 4, 6, 8, 10, ...

183. Find the sum of the first 6 terms of the series: -1, -3, -5, -7, ...

184. Find the sum of the infinite series: 1 + 1/2 + 1/4 + 1/8 + ...

185.

String (36 Problems)

186. Write a program to find the length of a string.

187. Write a program to copy one string to another string.

188. Write a program to concatenate two strings.

189. Write a program to compare two strings.

190. Write a program to convert lowercase string to uppercase and uppercase string to lowercase string.

191. Write a program to toggle the case of each character of a string.

192. Write a program to find the total number of alphabets, digits, or special characters in a string.

193. Write a program to count the total number of vowels, consonants, and words in a string.

194. Write a program to check whether a string is a palindrome or not.

195. Write a program to reverse the order of words in a given string.

196. Write a program to find the first and last occurrence of a character in a given string.

197. Write a program to search all occurrences of a character in a given string.

198. Write a program to count occurrences of a character in a given string.

199. Write a program to find the highest and lowest frequency character in a string.

200. Write a program to count the frequency of each character in a string.

201. Write a program to remove the first occurrence of a character from a string.

202. Write a program to remove the last occurrence of a character from a string.

203. Write a program to remove all occurrences of a character from a string.

204. Write a program to remove all repeated characters from a given string.

205. Write a program to replace the first occurrence of a character with another in a string.

206. Write a program to replace the last occurrence of a character with another in a string.

207. Write a program to replace all occurrences of a character with another in a string.

208. Write a program to find the first and occurrence of a word in a given string.

209. Write a program to search all occurrences of a word in a given string.

210. Write a program to count occurrences of a word in a given string.

211. Write a program to remove the first occurrence of a word from a string.

212. Write a program to remove the last occurrence of a word in a given string.

213. Write a program to remove all occurrences of a word in a given string.

214. Write a program to trim leading white space characters from a given string.

215. Write a program to trim trailing white space characters from a given string.

216. Write a program to trim both leading and trailing white space characters from a given string.

217. Write a program to remove all extra blank spaces from a given string.

218. Given a string S. Print the origin string after replacing the following:

- Replace every comma character ',' with a space character.
- Replace every capital character in S with its respective small character and Vice Versa.

Input	Expected Output
happy,NewYear,enjoy	HAPPY nEWyEAR ENJOY

219. Given a string S. Print the number of times that "EGYPT" word can be formed from S's characters.

Note: Case of the letters doesn't matter. For example: "Egypt", "egypt" and "eGyPt" are the same.

Input	Expected Output
EgYpTaz	1
pemigdbeigyypetet	2

220. Given a string S. Print S after replacing every sub-string that is equal to "EGYPT" with space.

Input	Output
BRITISHEGYPTGHANA	BRITISH GHANA
ITALYKOREAEGYPTEGYPTALGERIAEGYPTZ	ITALYKOREA ALGERIA Z

Function (11 Problems)

221. Write a program to calculate the sum of two numbers using a user-defined function.

222. Write a program to calculate the sum of two numbers using a user-defined function [Input must be taken from user].

223. Write a program to make a calculator using a user-defined function.

224. Write a program to find a cube of any number using a user-defined function.

225. Write a program to find a circle's diameter, circumference, and area using a user-defined function.

226. Write a program to find maximum and minimum numbers between two numbers using a user-defined function.

227. Write a program to check whether a number is even or odd using a user-defined function.

228. Write a program to check whether a number is a prime, Armstrong, or perfect number using a user-defined function.[Must be used 3 individual functions to check prime, Armstrong, or perfect number.].

229. Write a program to find all prime, strong, and Armstrong numbers between a given interval. [Must be used 3 individual functions for prime, strong, and Armstrong numbers.].

230. Write a program to add two matrices or 2D arrays using a function.

231. Write a program to do addition, subtraction, multiplication, and division between two matrices or 2D arrays using a function. [Must be used 4 functions for addition, subtraction, multiplication, and division].

Pointer (6 Problems)

232. Write a program to create, initialize and use pointers.

233. Write a program to add two numbers using pointers.

234. Write a program to swap two numbers using pointers.

235. Write a program to input and print array elements using a pointer.

236. Write a program to copy one array to another using a pointer.

237. Write a C program to add and multiply two matrices using pointers.

Files (12 Problems)

238. Write a program to create a file and write contents, and save and close the file.
239. Write a program to read file contents and display them on the console.
240. Write a program to read numbers from a file and write even, odd and prime numbers to separate files.

241. Write a program to copy the contents of one text file to another.

242. Write a program to count the number of lines in a text file.

243. Write a program to search for a specific word in a text file and display the line numbers where it occurs.

244. Write a program to read and display the contents of a binary file.

245. Write a program to merge two text files into a single text file.

246. Write a program to read a CSV (Comma-Separated Values) file and display its contents in tabular form.

247. Write a program to read a binary file containing student records and display the records in a structured format.

248. Write a program to read a text file and count the occurrences of a specific word.

249. Write a program to read data from a CSV file containing product information, calculate the total price of all products, and display it.

250. Write a program that reads a text file containing names and their corresponding ages, and then calculates and displays the average age of all individuals in the file.