Questions

CHQ6.

In an organization they decide to give bonus to all the employees on New Year. A 5% bonus on salary is given to the grade A workers and 10% bonus on salary to the grade B workers. Write a program to enter the salary and grade of the employee. If the salary of the employee is less than $10,000 then the employee gets an extra 2% bonus on salary Calculate the bonus that has to be given to the employee and print the salary that the employee will get.

Sample Input & Output:
Enter the grade of the employee: B
Enter the employee salary: 50000
Salary=50000
Bonus=5000.0
Total to be paid:55000.0

Test Cases

1. Enter the grade of the employee: A
Enter the employee salary: 8000
2. Enter the grade of the employee: C
Enter the employee salary: 60000
3. Enter the grade of the employee: B
Enter the employee salary: 0
4. Enter the grade of the employee: 38000
Enter the employee salary: A
5. Enter the grade of the employee: B
Enter the employee salary: -8000

CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CHQ4
CHQ5
CHQ6
CHQ7
CHQ8

C | Run | Save | Logout

```c
#include<stdio.h>
void main()
{
  float s,total;
  int b;
  char g;
  scanf("%d",&s);
  scanf("%c",&g);
  if(g=='a')
  {
    b=s*0.05;
  }
  if(g=='b')
  {
    b=s*0.1;
  }
  if(s<10000)
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

Questions

CHQ7.

Write a program to search the given element using binary search method and display its position in a linear array.

Sample Input:
Array of elements = {16, 18, 27, 16, 23, 21, 19}
Element to search = 23

Sample Output:
Given element 23 is found at 5 th position

Test Cases

CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CHQ4
CHQ5
CHQ6
CHQ7
CHQ8

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
    int c, first, last, middle, n, search, array[100];
    printf("Enter number of elements\n");
    scanf("%d",&n);
    printf("Enter %d integers\n", n);
    for ( c = 0 ; c < n ; c++ )
        scanf("%d",&array[c]);
    printf("Enter value to find\n");
    scanf("%d",&search);
    first = 0;
    last = n - 1;
    middle = (first+last)/2;
    while( first <= last )
    {
        if ( array[middle] < search )
```

Your Input Goes Here...!!!

Mth maximum number: 9

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Questions

CMQ7.

Write a C program to display the subject and mark information using Dynamic Memory Allocation for Structure.

Sample Input:
Enter the number of records: 2
Enter subject 1 and marks:
Science 82
Enter subject 2 and marks:
DSA 73

Sample Output :
Science 82
DSA 73

Test Cases

Enter the number of records :4 (Any details of subject and marks)
Enter the number of records :A
Enter the number of records :1 (CPP 74.5)
Enter the number of records :1 (CPP seventy)
Enter the number of records :1 (233 75)

C | Run | Save | Logout

```c
#include <stdio.h>
#include <stdlib.h>
struct course
{
int marks;
char subject[30];
};
int main() {
struct course *ptr;
int noOfRecords;
printf("Enter the number of records: ");
scanf("%d", &noOfRecords);
ptr = (struct course *)malloc(noOfRecords * sizeof(struct course));
for (int i = 0; i < noOfRecords; ++i) {
printf("Enter subject and marks:\n");
scanf("%s %d", (ptr + i)->subject, &(ptr + i)->marks);
}
```

Your Input Goes Here...!!!

Enter the number of records: Displaying

Questions

CHQ5.

Write a program in C to check Armstrong and perfect numbers using the function.

Test Data :
Input any number: 371
Expected Output :
The 371 is an Armstrong number.
The 371 is not a Perfect number.

Test Cases

CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CHQ4
CHQ5
CHQ6
CHQ7
CHQ8

C | Run | Save | Logout

```c
#include<stdio.h>
#include<math.h>
int isarmstrong(int num);
int isperfect(int num);
int main()
{
int num;
printf("enter a number:");
scanf("%d", &num);
if(isarmstrong(num))
{
printf("%d is an armstrong number.\n",num);
}
else
{
printf("%d is not an armstrong number.\n",num);
}
```

371

enter a number:371 is an armstrong number.

Questions

CHQ4.

Write a program to print n prime numbers then find the nth Prime number.

Sample Input:
N = 3

Sample Output:
3rd Prime number is 5
3 prime numbers after 5 are: 7, 11, 13

Test Cases

1. N = P
2. N = 0
3. N = -4
4. N = 11
5. N = 7.2

CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CHQ4
CHQ5
CHQ6
CHQ7
CHQ8

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int i,j,cnt,flag,n,nthprime;
cnt=0;
START:
printf("enter a positive number(n):");
scanf("%d",&n);
if(n<=0)
{
printf("enter any positive number, try again, try again\n");
goto START;
}
for(j=2; cnt<n; j++)
{
flag=0;
for(i=2; i<=j/2;i++)
```

5

enter a positive number(n):5(th) prime

Questions

CMQ8.

Write a C program to display the details of student(Name , Age) by passing structures to a function.

Sample Input :
Enter No.Students: 1
Enter student 1 Name, Age :AAA, 25

Sample Output:
Student 1 details:
Name: AAA
Age : 25

Test Cases

No.Student :4 (Any details of student)
No.Student: 5
No.Student: 1(62, 28)
No.Student: A
No.Student: 1(xxx, 28.2)

C | Run | Save | Logout

```c
#include<stdio.h>
struct student
{
char firstName[50];
int roll;
float marks;
}
s[5];
int main()
{
int i;
printf("enter information of the student:\n");
for(i=0; i<5; ++i)
{
s[i].roll=i+1;
printf("\nfor roll number%d,\n",s[i].roll);
printf("enter first name:");
```

Your Input Goes Here...!!!

enter a positive number(n):5(th) prime

Questions

CMQ5.

Write a program to find the number of student users in the college, get the total users, staff

Sample Input:

Total Users: 856

Staff Users: 126

Sample Output:

Student Users: 688

Test Cases

1. Total User: 0
2. Total User: -143
3. Total User: 1026, Staff User: 1026
4. Total User: 450, Staff User: 540
5. Total User: 600, Staff User: 450

CEQ6
CEQ7
CEQ8
CEQ9
CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CHQ4

C | Run | Save | Logout

```c
#include <stdio.h>
#include <conio.h>
#include <math.h>
int main()
{
int rangenumber,c=0,num=2,i,least=0;
printf("enter nth number\n");
scanf("%d",&rangenumber);
while(c!=rangenumber)
{
int count=0;
for(i=2;i<=sqrt(num);i++)
{if(num%i==0)
{count++;
break;
}
}
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

Questions

CMQ6.

Write a program to print the longest word in the below text "Programming does wonders in the world".

Test Cases

CEQ6
CEQ7
CEQ8
CEQ9
CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CHQ4

C | Run | Save | Logout

```c
#include<conio.h>
#include<stdio.h>
#include<string.h>
int main()
{
 char string[100], longest[30];
 int count = 0, max = 0,i,j,index=0,length;

 printf("Enter Sentence:\n");
 gets(string);
 length = strlen(string);
 index=0;
 for( i = 0 ; i< length ; i++)
 {
  if(string[i] != ' ')
  {
   count++;
```

programming does wonders in the world

<pre>ExecutionFolder/192211098.c: In

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Questions

CMQ4.

Write a program to print the all Odd numbers and number of even numbers in between M and N?

Sample Input:

M = 6

N = 15

Sample Output:

All Odd Numbers = 7,9,11,13

All Even Numbers = 8 10 12 14

Test Cases

1. M = 100, N = 100
2. M = 500, N = 100
3. M = -5, N = 4
4. M = 72, N = -72
5. M = 0, N = 0

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int M,N,count=0;
printf("enter the value of M:");
scanf("%d",&M);
printf("enter the value of N:");
scanf("%d",&N);
printf("odd numbers between %d and %d are:",M,N);
for(int i=M;i<=N;i++)
{
if(i%2!=0)
{
printf("%d",i);
}
else
{
```

```
6
15
```

```
enter the value of M:enter the value of N:odd
```

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Questions

CEQ8.

Write a program using function to calculate the simple interest. Suppose the customer is a senior citizen. He is being offered 12 percent rate of interest; for all other customers, the ROI is 10 percent.

Sample Input:
Enter the principal amount: 200000
Enter the no of years: 3
Is customer senior citizen (y/n): n

Sample Output:
Interest: 60000

Test Cases

1. Principal: 2000 , Years: 0
2. Principal: 20000 , Years: -2
3. Principal: -2000 , Years: 2
4. Principal: 2 , Years: 2000
5. Principal: 0 , Years: 5

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8

C | Run | Save | Logout

```c
#include <stdio.h>

float calculateInterest(float principal, float rate, float time)
{
    return (principal * rate * time) / 100;
}

int main()
{
    float principal, time, rate, interest;
    int isSeniorCitizen;

    printf("Enter the principal amount: ");
    scanf("%f", &principal);

    printf("Enter the time in years: ");
    scanf("%f", &time);
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

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Questions

CEQ9.

Write a C Program to Find Even Sum of Fibonacci Series Till number N?

Sample Input: n = 4

Sample Output: 33
(N = 4, So here the Fibonacci series will be produced from 0th term till 8th term:0, 1, 1, 2,
Sum of numbers at even indexes = 0 + 1 + 3 + 8 + 21 = 33)

Test Cases

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8
CEQ9

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int n=4;
int m=n*2;
int a=0,b=1,c=0,d=0,i;
for(i=0; i<m; i++)
{
c=a+b;
a=b;
b=c;
if(i%2!=0)
{
d+=a;
}
}
printf("the sum is %d",d);
```

Your Input Goes Here...!!!

the sum is 33

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Questions

CEQ6.

Write a program to print Right Triangle Star Pattern.

```
Sample Input:: n = 5
Output:
        *
      * *
    * * *
  * * * *
* * * * *
```

Test Cases

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8

C | Run | Save | Logout

```c
#include <stdio.h>

int main() {
   int n;
   printf("Enter the number of rows: ");
   scanf("%d", &n);
   for (int i = 1; i <= n; i++) {
      for (int j = 1; j <= i; j++) {
         printf("* ");
      }
      printf("\n");
   }
   return 0;
}
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

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Questions

CEQ7.

Write a program to print the below pattern?

```
                    1
                1   2   1
            1   2   3   2   1
        1   2   3   4   3   2   1
1       2   3   4   5   4   3   2   1
```

Test Cases

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8
CEQ9

C | Run | Save | Logout

```c
#include <stdio.h>
void main()
{
  int i, j, n;
  printf("input number of rows:");
  scanf("%d", &n);
  for(i = 0; i <= n; i++)
  printf("");
  for(j = 1; j <= n - i; j++)
  printf("%d", j);
  for(j = i - 1; j >= 1; j--)
  printf("%d", j);
  printf("\n");
}
}
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

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Questions

CEQ5.

Find the LCM and GCD of n numbers?
Sample Input:
N value = 2
Number 1 = 16
Number 2 = 20
Sample Output:
LCM = 80
GCD = 4

Test Cases

1. N = 3, {12, 25, 30}
2. N = 2, {52, 25, 63}
3. N = 3, {17, 19, 11}
4. N = -2, {52, 60}
5. N = 2, {30, 45}

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8
CEQ9

C | Run | Save | Logout

```c
#include <stdio.h>
int gcd(int a, int b)
{
if (a == 0)
{
return b;
}
return gcd(b % a, a);
}
int lcm(int a, int b) {
return (a * b) / gcd(a, b);
}
int main()
{
int a = 20, b = 30;
int lcm_val = lcm(a, b);
int gcd_val = gcd(a, b);
```

Your Input Goes Here...!!!

LCM of 20 and 30 is 60

Questions

CEQ44.

Write a program to find the square root of a perfect square number(print both the positive and

Sample Input:
Enter the number : 6561

Sample Output:
Square Root: 81, -81

Test Cases

1. 1225
2. 9801
3. 1827
4. -100
5. 0

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8

C | Run | Save | Logout

```c
#include <stdio.h>
#include <math.h>

int main() {
    int n;
    float sqrt_n;

    printf("Enter a perfect square number: ");
    scanf("%d", &n);

    sqrt_n = sqrt(n);

    if (sqrt_n == (int)sqrt_n) {
        printf("Positive square root: %.0f\n", sqrt_n);
        printf("Negative square root: %.0f\n", -sqrt_n);
    } else {
        printf("%d is not a perfect square number\n", n);
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

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Questions

CEQ45.

Write a program to print inverted pyramid pattern.

Test Cases

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8

C | Run | Save | Logout

```c
#include<stdio.h>
void main()
{
int i,j,n;
printf("enter n value:");
scanf("%d", &n);
printf("\n");
for(i=1;i<=n;++i)
{
for(j=i;j<=n;j++)
{
printf("");
}
for(j=i;j<=n;j++)
{
printf("*");
}
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

Questions

CEQ42.

Write a program to print hollow Rectangle Dollar pattern?

Test Cases

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8
CEQ9

C | Run | Save | Logout

```c
#include <stdio.h>

int main() {
    int rows, columns, i, j;

    printf("Enter the number of rows: ");
    scanf("%d", &rows);

    printf("Enter the number of columns: ");
    scanf("%d", &columns);

    for(i = 1; i <= rows; i++) {
        for(j = 1; j <= columns; j++) {
            if(i == 1 || i == rows || j == 1 || j == columns)
                printf("$");
            else
                printf(" ");
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

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Questions

CEQ43.

Write a program to find the sum of digits of N digit number.

Sample Input:
Enter N value : 3
Enter 3 digit number: 143

Sample Output:
Sum of 3 digit number: 8

Test Cases

1. N = 2, 158
2. N = 3, 14
3. N = 4, 0148
4. N = 1, 0004
5. N = 4, 7263

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8

C | Run | Save | Logout

```c
#include <stdio.h>

int main() {
    int number, sum = 0;

    printf("Enter an n-digit number: ");
    scanf("%d", &number);

    while (number != 0) {
        sum += number % 10;    // Add the last digit to the sum
        number /= 10;          // Remove the last digit from the number
    }

    printf("Sum of digits = %d\n", sum);

    return 0;
}
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

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Questions

CEQ41.

Write a program that accepts a string from user and displays the same string after removing vowels from it.

Sample Input & Output:
Enter a string: we can play the game
The string without vowels is: w cn ply thgm

Test Cases

CEQ41
CEQ42
CEQ43
CEQ44
CEQ45
CEQ5
CEQ6
CEQ7
CEQ8

C | Run | Save | Logout

```c
#include <stdio.h>
#include <string.h>

int main() {
    char str[100], newstr[100];
    int i, j = 0, len;

    printf("Enter a string: ");
    fgets(str, 100, stdin);

    len = strlen(str);

    for(i = 0; i < len; i++) {
        if(str[i] != 'a' && str[i] != 'e' && str[i] != 'i' && str[i] != 'o' && str[i] != 'u' && str[i] != 'A'
            newstr[j] = str[i];
            j++;
        }
```

Your Input Goes Here...!!!

Your OUTPUT Goes Here...!!!

Questions
CHQ8.

Find the M^{th} maximum number and N^{th} minimum number in an array and then find the sum of it and

Sample Input:
Array of elements = {14, 16, 87, 36, 25, 89, 34}
M = 1
N = 3

Sample Output:
1st Maximum Number = 89
3rd Minimum Number = 25
Sum = 114
Difference = 64

Test Cases

1. {16, 16, 16 16, 16}, M = 0, N = 1
2. {0, 0, 0, 0}, M = 1, N = 2
3. {-12, -78, -35, -42, -85}, M = 3 , N = 3
4. {15, 19, 34, 56, 12}, M = 6 , N = 3
5. {85, 45, 65, 75, 95}, M = 5 , N = 7

C | Run | Save | Logout

```c
#include <stdio.h>
int main()
{
int arr[] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10};
int arr_size = sizeof(arr) / sizeof(int);
int m = 2;
int n = 3;
for (int i = 0; i < arr_size; i++)
{
for (int j = i + 1; j < arr_size; j++)
{
if (arr[i] > arr[j]) {
int temp = arr[i];
arr[i] = arr[j];
arr[j] = temp;
}
}
```

```
14
16
87
36
25
89
34
```

Mth maximum number: 9