

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

CHQ4

CHQ5

CHQ6

CHQ7

CHQ8

CHQ4

CHQ5

CHQ6

CHQ7

CHQ8

C

Run

Save

Logout

```
1. #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

```
1. #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

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)

CEQ6

CEQ7

CEQ8

CEQ9

CMQ4

CMQ5

CMQ6

CMQ7

CMQ8

CHQ4

Logout

```
1. #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

CHQ4

CHQ5

CHQ6

CHQ7

CHQ8

CHQ4

CHQ5

CHQ6

CHQ7

CHQ8

C

Run

Save

Logout

```
1. #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

CHQ4

CHQ5

CHQ6

CHQ7

CHQ8

CHQ4

CHQ5

CHQ6

CHQ7

CHQ8

C

Run

Save

Logout

```
1. #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)

CEQ6

CEQ7

CEQ8

CEQ9

CMQ4

CMQ5

CMQ6

CMQ7

CMQ8

CHQ4

C

Run

Save

Logout

```
1. #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

Login

```
1. #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

Logout

```
1. #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

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

CEQ6

CEQ7

CEQ8

CEQ9

CMQ4

CMQ5

CMQ6

CMQ7

CMQ8

CHQ4

Logout

```
1. #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

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

CEQ9

C

Run

Save

Logout

```
1. #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...!!!

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, 3, 5, 8, 13. 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

```
1. #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

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

CEQ9

C

Run

Save

Login

```
1. #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....!!!

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
  
```

Test Cases

CEQ41

CEQ42

CEQ43

CEQ44

CEQ45

CEQ5

CEQ6

CEQ7

CEQ8

CEQ9

C

Run

Save

Logout

```

1. #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....!!!

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

Login

```
1. #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

CEQ9

C

Run

Save

Logout

```
1. #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...!!!

Questions CEQ45.

Write a program to print inverted pyramid pattern.

Test Cases

CEQ41

CEQ42

CEQ43

CEQ44

CEQ45

CEQ5

CEQ6

CEQ7

CEQ8

CEQ9

C

Run

Save

Login

```
1. #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

```
1. #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....!!!

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

CEQ9

Logout

```
1. #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...!!!

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

CEQ9

C

Run

Save

Logout

```
1. #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

CHQ4

CHQ5

CHQ6

CHQ7

CHQ8

CHQ4

CHQ5

CHQ6

CHQ7

CHQ8

Logout

```
1. #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

