**Day 1**

**TASK 1**

Write a C program to print “Hello World.”

#include<stdio.h>

void main()

{

    printf("Hello World");

}

**TASK 2**

Write a C program to convert a number to characters .

#include<stdio.h>

void main()

{

    int num;

    printf("Enter a number");

    scanf("%d",&num);

    printf("Number converted into char that is : %c",num);

}

**TASK 3**

Write a C program to take any integer number & print the square of the number.

#include<stdio.h>

void main()

{

    int num;

    printf("Enter a number\n");

    scanf("%d",&num);

    printf("The square of the number is : %d",num\*num);

}

**TASK 4**

Write a program to read to integers M and N & swap their value without using third variable.

#include<stdio.h>

void main()

{

    int num1,num2;

    printf("Enter first number\n");

    printf("Enter second number\n");

    scanf("%d%d",&num1,&num2);

    num1=num1+num2;

    num2=num1-num2;

    num1=num1-num2;

    printf("The swapped first number is : %d\n",num1);

    printf("The swapped second number is : %d",num2);

}

**TASK 5**

Write a program to convert specified days into years and weaks and days :

Note: Ignore Leap Year

#include <stdio.h>

int main()

{

    int days, years, weeks;

    printf("Enter days to calculate year,weeks,days\n");

    scanf("%d",&days);

    // Converts days to years, weeks and days

    years = days/365;

    weeks = (days % 365)/7;

    days = days- ((years\*365) + (weeks\*7));

    printf("Years: %d\n", years);

    printf("Weeks: %d\n", weeks);

    printf("Days: %d \n", days);

    return 0;

}

**TASK 6**

#include<stdio.h>

int main()

{

    int num1,num2;

    printf("Enter the first number");

    scanf("%d",&num1);

    printf("Enter the second number");

    scanf("%d",&num2);

    printf("sum of two numbers: %d",(num1\*num2));

    return 0;

}

**TASK 7**

**TASK 8**

**TASK 9**

#include<stdio.h>

void main()

{

    float r, Area;

    printf("Enter the radius of circle\n");

    scanf("%f",&r);

    Area=(3.14\*r\*r);

    printf("Area of circle: %f", Area);

}

**TASK 10**

#include<stdio.h>

int main()

{

    float a,b,c,avg;

    printf("Enter the the three numbers\n");

    scanf("%f%f%f",&a,&b,&c);

    avg=(a+b+c)/3;

    printf("Average of the numbers: %f", avg);

}

**TASK 11**

#include<stdio.h>

int main()

{

    float a,cube;

    printf("Enter a  number\n");

    scanf("%f",&a);

    cube=a\*a\*a;

    printf("cube of the numbers: %f", cube);

}

**TASK 12**

#include<stdio.h>

int main()

{

    float p,r,t,SI;

    printf("Enter the Principal amount\t");

    scanf("%f",&p);

    printf("Enter the rate\t");

    scanf("%f",&r);

    printf("Enter the time\t");

    scanf("%f",&t);

    SI=(p\*r\*t)/100;

    printf("Simple Interest : %f",SI);

}

**Day 2**

**TASK 1**

#include<stdio.h>

int main()

{

    int a,b;

    printf("Enter two numbers\t");

    scanf("%d %d",&a,&b);

    if (a==b){

       printf("both are equal\t");

    }

    else{

       printf("Not equal");

    }

}

**TASK 2**

#include<stdio.h>

int main(){

    int a,b,c;

    printf("Enter three number to check the biggest of them\n");

    scanf("%d\n%d\n%d",&a,&b,&c);

    if (a>b)

     printf("The biggest number is %d",a);

    else if (b>c)

    {

     printf("The biggest number is %d",b);

    }

    else

     printf("The biggest number is %d",c);

}

**TASK 3**

#include<stdio.h>

int main(){

    int a;

    printf("Enter a number to check whether it is even or odd\n");

    scanf("%d",&a);

    if (a%2==0){

       printf("Even Number");

    }

    else{

        printf("Odd Number");

    }

}

**TASK 4**

#include<stdio.h>

int main()

{

    int year;

    printf("Enter the year to check whether it is leap year or not\n");

    scanf("%d",&year);

    if (year%4==0)

    {

        printf("It is leap year");

    }

    else

       printf("it is not leap year");

}

**TASK 5**

#include<stdio.h>

int main()

{

    int x,y;

    printf("Enter the quadrant\n");

    scanf("%d\n%d",&x,&y);

    if(x>0 && y>0)

          printf("coordinates lies in first quadrant");

    else if (x<0 && y>0)

    {

            printf("coordinates lies in second quadrant");

    }

    else if (x<0 && y<0)

    {

            printf("coordinates lies in third quadrant");

    }

    else

    {

         printf("coordinates lies in fourth quadrant");

    }

}

**TASK 6**

#include<stdio.h>

int main()

{

    int Hindi,eng,math, per;

    printf("Enter the marks of Hindi\n");

    scanf("%d",&Hindi);

    printf("Enter the marks of English\n");

    scanf("%d",&eng);

    printf("Enter the marks of Maths\n");

    scanf("%d",&math);

    per=(Hindi+eng+math)/3;

    printf("The percentage of three subjects is %d%%\n", per);

    if(per>=90)

    {

      printf("First division ");

     }

    else if(per>=70)

    {

       printf("Second division ");

    }

    else

    {

        printf("Third division ");

    }

}

**TASK 7**

#include<stdio.h>

int main()

{

    int temp;

    printf("Enter the temperature in celcius\n");

    scanf("%d",&temp);

    if(temp<=0)

    {

      printf("Freezing weather ");

     }

    else if(temp>=1 && temp<=10)

    {

       printf("very cold weather ");

    }

    else if (temp>=11 && temp<=30)

    {

       printf("Normal weather");

    }

    else

    {

        printf("very hot weather ");

    }

}

**TASK 8**

#include<stdio.h>

int main()

{

    int a,b,c;

    printf("Enter the side of triangle\n");

    scanf("%d\n%d\n%d",&a,&b,&c);

    if(a==b && b==c)

    {

      printf("Equilateral triangle ");

     }

    else if(a==b || b==c || a==c)

    {

       printf("Isosceles triangle ");

    }

    else

    {

        printf("Scalene triangle ");

    }

}

**TASK 9**

#include<stdio.h>

int main()

{

    int u;

    float charge;

    printf("Enter the unit \n");

    scanf("%d",&u);

    if(u>=0 && u<=199)

    {

      charge=u\*1.20;

      printf("The amount of the bill : %f ",charge);

     }

    else if(u>=200 && u<=400)

    {

       charge=u\*1.50;

       printf("The amount of the bill : %f ", charge);

    }

    else if(u>=400 && u<=600)

    {

       charge=u\*1.80;

       printf("The amount of the bill : %f ", charge);

    }

    else

    {

        charge=u\*2.0;

        printf("The amount of the bill : %f ", charge);

    }

}

**TASK 10**

#include<stdio.h>

int main()

{

    float grade;

    printf("Enter the grade percentage\n");

    scanf("%f",&grade);

    if(grade>=90)

    {

      printf("your grade is : A ");

     }

    else if(grade>75 && grade<=90)

    {

       printf("your grade is : B");

    }

    else if(grade>=61 && grade<=75)

    {

       printf("your grade is : C");

    }

    else if(grade>=46&& grade<=60)

    {

       printf("your grade is : D");

    }

    else if(grade>=36 && grade<=45)

    {

       printf("your grade is : E");

    }

    else if(grade<=30)

    {

       printf("You are fail");

    }

}

**TASK 11**

#include <stdio.h>

void main ()

{

    int m;

    printf("Enter month number\n");

    scanf("%d",&m);

    switch (m){

    case 1:  printf("january");break;

    case 2:  printf("february");break;

    case 3:  printf("march ");break;

    case 4:  printf("april");break;

    case 5:  printf("may");break;

    case 6:  printf("june");break;

    case 7:  printf("july");break;

    case 8:  printf("August");break;

    case 9:  printf("September");break;

    case 10:  printf("October");break;

    case 11: printf("November");break;

    case 12: printf("December");break;

    default: printf("you have entered wrong number");

    }

}

**TASK 12**

#include<stdio.h>

void main()

{

    char Char;

    printf("Enter a Charcter\n");

    scanf("%d",&Char);

    if (Char>=0 && Char <=9)

    {

        printf("IT is digit");

    }

    else if(Char>='a' && Char<='z')

    {

        printf("It is alphabet");

    }

    else

      {

        printf("It is special cahr");

      }

}

**TASK 13**

#include<stdio.h>

void main()

{

    char Char;

    printf("Enter a Charcter\n");

    scanf("%d",&Char);

    if (Char>=0 && Char <=9)

    {

        printf("IT is digit");

    }

    else if(Char>='a' && Char<='z')

    {

        printf("It is alphabet");

    }

    else

      {

        printf("It is special cahr");

      }

}

**TASK 14**

#include <stdio.h>

void main ()

{

    int m;

    printf("Enter month number\n");

    scanf("%d",&m);

    switch (m){

    case 1:  printf("jan: 31days");break;

    case 2:  printf("feb: 30days");break;

    case 3:  printf("march: 28/29days");break;

    case 4:  printf("april: 30days");break;

    case 5:  printf("may: 31days");break;

    case 6:  printf("june: 30days");break;

    case 7:  printf("july: 31days");break;

    case 8:  printf("August: 31days");break;

    case 9:  printf("September: 30days");break;

    case 10:  printf("October: 31days");break;

    case 11: printf("November: 30days");break;

    case 12: printf("December: 31days");break;

    default: printf("you have entered wrong number");

    }

}

**TASK 15**

#include <stdio.h>

void main ()

{

    int m;

    printf("Enter week number (1-7) number\n");

    scanf("%d",&m);

    switch (m){

    case 1:  printf("Monday");break;

    case 2:  printf("Tuesday");break;

    case 3:  printf("Wednesday");break;

    case 4:  printf("Thursday");break;

    case 5:  printf("Friday");break;

    case 6:  printf("Saturday");break;

    case 7:  printf("Sunday");break;

    default: printf("you have entered wrong number");

    }

}

**TASK 16**

#include<stdio.h>

int main()

{

    int operand1,operand2;

    char op;

    printf("Enter The symbol (+, -, \*, /) which operation do you want to perform \n");

    scanf("%c",&op);

    printf("Enter the operand1\n");

    scanf("%d",&operand1);

    printf("Enter the operand2\n");

    scanf("%d",&operand2);

    switch (op)

    {

    case '+':printf("sum of numbers:%d ",(operand1+operand2)); break;

    case '-':printf("difference of numbers:%d ",(operand1-operand2)); break;

    case '\*':printf("multiplication of numbers:%d ",(operand1\*operand2)); break;

    case '/':printf("division of numbers:%d ",(operand1/operand2)); break;

    default: printf("Please enter valid character"); break;

    }

}

**TASK 17**

#include<stdio.h>

int main()

{

    int num;

    printf("Enter a number\n");

    scanf("%d",&num);

    switch (num%2)

    {

    case 0:printf("even number");

           break;

    case 1:printf("Odd number");

           break;

    }

}

**TASK 18**

#include<stdio.h>

void main()

{

    char alpha;

    printf("Enter an alphabet to check whether it is vowel or consonant\n");

    scanf("%c",&alpha);

   switch(alpha)

    {

        case 'a':

            printf("Vowel");

            break;

        case 'e':

            printf("Vowel");

            break;

        case 'i':

            printf("Vowel");

            break;

        case 'o':

            printf("Vowel");

            break;

        case 'u':

            printf("Vowel");

            break;

        case 'A':

            printf("Vowel");

            break;

        case 'E':

            printf("Vowel");

            break;

        case 'I':

            printf("Vowel");

            break;

        case 'O':

            printf("Vowel");

            break;

        case 'U':

            printf("Vowel");

            break;

        default:

            printf("Consonant");

    }

}

**TASK 19**

#include <stdio.h>

void main()

{

    char gender;

    printf("Enter gender (M/m or F/f): ");

    scanf("%c",&gender);

    switch(gender)

    {

        case 'M':

        case 'm':

            printf("Male.");

            break;

        case 'F':

        case 'f':

            printf("Female.");

            break;

        default:

            printf("Unspecified Gender.");

    }

    printf("\n");

}

**Day 2**

**TASK 1**

#include<stdio.h>

int main()

{

    int i;

    for(i=1;i<16;i=i+2)

    {

        printf("%d\t",i);

    }

}

#include<stdio.h>

int main()

{

    int i;

    for(i=15;i>1;i=i-2)

    {

        printf("%d\t",i);

    }

}

#include<stdio.h>

int main()

{

    int i;

    for(i=2;i<=20;i=i+3)

    {

        printf("%d\t",i);

    }

}

#include<stdio.h>

int main()

{

    int i;

    for(i=20;i>=3;i=i-3)

    {

        printf("%d\t",i);

    }

}

#include<stdio.h>

int main()

{

    int i;

    for(i=20;i>=1;i=i/2)

    {

        printf("%d\t",i);

    }

}

#include<stdio.h>

int main()

{

    int i;

    for(i=1;i<=32;i=i\*2)

    {

        printf("%d\t",i);

    }

}

#include<stdio.h>

int main()

{

    int i;

    for(i=10;i>=1;i--)

    {

        printf("%d\t",i);

    }

}

**TASK 2**

#include<stdio.h>

int main()

{

    int i;

    for(i=10;i>=1;i--)

    {

        printf("%d\t",i);

    }

}

**TASK 3**

#include<stdio.h>

int main()

{

    int i,sum=0;

    for(i=1;i<=10;i++)

    {

        sum=sum+i;

    }

     printf("%d\t",sum);

}

**TASK 4**

#include<stdio.h>

int main()

{

    int i,num,sum=0;

    printf("Enter a nth term to print natural number:\n");

    scanf("%d",&num);

    printf("natural numbers are:");

    for(i=1;i<=num;i++)

    {

        sum=sum+i;

        printf("%d\t",i);

    }

     printf("\nsum is :%d\t",sum);

}

**TASK 5**

#include<stdio.h>

int main()

{

    int i,num,r,sum=0;

    printf("Enter the number:\n");

    scanf("%d",&num);

    for(i=num;num!=0;num=num/10)

    {   r=num % 10;

        sum=sum\*10+r;

    }

    printf("Reverse number is: %d",sum);

}

**TASK 6**

#include<stdio.h>

int main()

{

    int i,num,r,original,sum=0;

    printf("Enter the number:\n");

    scanf("%d",&num);

    original=num;

    for(i=num;num!=0;num=num/10)

    {   r=num % 10;

        sum=sum\*10+r;

    }

    printf("Reverse number is: %d",sum);

    if(sum==original)

    {

        printf("\nIt is Palindrome");

    }

    else

    {

        printf("\nIt is not Palindrome");

    }

}

**TASK 7**

#include<stdio.h>

int main()

{

    int i,num,r,original,sum=0;

    printf("Enter the number:\n");

    scanf("%d",&num);

    original=num;

    for(i=num;num!=0;num=num/10)

    {   r=num % 10;

        sum=sum+(r\*r\*r);

    }

    if(sum==original)

    {

        printf("\nIt is Armstrong");

    }

    else

    {

        printf("\nIt is not Armstrong");

    }

}

**TASK 8**

**TASK 9**

**TASK 10**

**TASK 11**

#include<stdio.h>

void main()

{

    int i,num;

    printf("Enter the nth number to print all even number\n");

    scanf("%d",&num);

    for(i=1; i<=num;i++)

    {

        if(i%2==0)

        {

            printf("%d\n",i);

        }

    }

}

**TASK 12**

#include<stdio.h>

int main()

{

    int i,j,num;

    printf("Enter the nth number to multiplication table\t");

    scanf("%d",&num);

    for(i=2; i<=num;i++)

    {

        printf("multiplication of %d\n",i);

        for(j=1;j<=10;j++)

        {

            printf("%d\n",(i\*j));

        }

    }

}

**TASK 13**

#include<stdio.h>

int main()

{

    int i,num,r,org,sum=0;

    printf("Enter the number:\n");

    scanf("%d",&num);

    org=num;

    for(i=num;num!=0;num=num/10)

    {   r=org % 10;

        sum=sum+r;

        org=org/10;

    }

     printf("\nsum of digits is: %d",sum);

}

**TASK 14**

    #include<stdio.h>

    void main()

    {

        int pass,password=1234;

        first:

        printf("\nEnter the password\t");

        scanf("%d",&pass);

        if(password==pass)

        {

            printf("correct password");

        }

        else

        {

            printf("wrong password");

            goto first;

        }

    }

**TASK 15**

**TASK 16**

1

#include <stdio.h>

​

int main() {

 char character;

 printf("Enter a character");

 scanf("%c",&character);

 if((character>='a' && character<='z') ||(character>='A'&& character<='Z'))

{

   printf("It is character");

  }

 else if(character>='0' && character<='9')

{

   printf("It is digit");

  }

  else

  {

   printf("It is special symbol");

  }

 return 0;

}

**2**

#include <stdio.h>

int main() {

char sym='a';

char a,c;

printf("Enter a character\n");

//scanf("%c",&sym);

if(sym>='a'&& sym <='z'){

printf("%C",sym-32);

}

else if(sym >='A'&& sym<='Z')

{

printf("%C",sym+32);

}

else {

printf("we can't change case of this character");

}

return 0;

}

**Switch statements :**

Switch( Expression)

{

case value:

//statements

Break;

}

Nested loop: Nested loop is a structure of loop where another loop comes in the block of a loop.

Write a program to check is amstrong or not

**Branching statement/jumping statement/transfer statement:**

Branching statements are used to terminate the execution of program.

Break

Continue

Return

Break and continue is a keyword that is only used in block of loop.

Break statement is used to stop all iterations of loop and transfers the control out of the loop.

Continue keyword is used to current iteration of loop and transfer the control to the next iteration of loop.

#include<stdio.h>

Int a,b;

Char choice;

add:

printf(“Enter two numbers:”);

scanf(“%d\n%d”,&a,&b);

printf(“result=%d”,(a+b));

printf(“program ends here”);

if(choice==’y’ || choice==’Y’)

{

goto add;

}

**Goto statement:**

Goto statement is used to tramsfer control to a predefined label.

Label defines a place /segment in the program.

**Array:**

Array is the collection of homogenous value/similar type values.

If you want t storb 10values of intgers type ,instead of creating 10 separate variable ,you can create an araray.

Which can store all values in a single variable but on different index;

Array stores its different values on its different index. Index of array starts from 0 and last index is size -1.

Where sixe of array is a predefined integer value. Size of array should be declared at compile time.

Syntax to declare a array:

Data\_Type array\_name[size];

Write a program to input 10 element of array and print all even index elements of array

Write a program to input 10 element of array and find sum of all elements

Write a program to input 10 element of array and find even index sum and odd index sum

Write a program to input 10 element of array and search first occurance of a value in array

Write a program to input 10 element of array and find how many even and odd values are present in array

Write a program to input 10 element of array and sort the element in ascending order

Write a program to input 2 array of 5 element of array and add element of array index wise.

Write a program to enter 15 elements of array and sort the element till a given index in ascending order.

**2D Array :**

2d array is the collection of multiple values where all values are stored in form a rows and columns.

2D array is the collection of multiple rows and multiple columns in each rows. In 2d array, we have to pass size of row and size of column in each row is same.

In 2D array , we have to pass size of row and size of columns at time of declaration.

To access any element of 2D array , we have to use 2 indexes, index of rows and index of column;

Write a program to input 5 subject marks of 3 student and print total of marks if student passed with first division

Write a program to input 5 subject marks of 3 student and print total and find percentage