**Assignment questions**

**1.Area and Circumference of a Circle**

//to find area and circumference of circle

#include<stdio.h>

Float area(float);

Float area(float x)

{

Float ar;

Ar=(3.14\*x\*x);

Return(ar);

}

Float circumf(float);

Float circumf(float y)

{

Float cir;

Cir=(2\*(3.14)\*y);

Return(cir);

}

int main()

{

Float s,rad,t;

Printf(“Enter the radius of circle.\n”);

Scanf(“%f”,&rad);

S=area(rad);

Printf(“The area of circle is %.3f\n”,s);

T=circumf(rad);

Printf(“The area of circle is %.3f\n”,t);

Return 0;

}

**2.** **Area of Triangle**

//to find area of triangle  
 #include<stdio.h>  
float area(float,float);  
float area(float x,float y)  
 {  
  float ar;  
  ar=(1/2.0f)\*x\*y;  
  return(ar);  
 }  
  
int main()  
{  
 float len,hei,t;  
 printf("Enter the Lenght and Height of triangle\n");  
 scanf("%f%f",&len,&hei);  
 t=area(len,hei);  
 printf("The area of triangle is: %.2f\n",t);  
 return 0;  
}

**3.Print Ascii Value of the Character**

//to print ascii value of character

#include<stdio.h>

Char asc(char);

Char asc(char x)

{

Printf(“The ascii value of %c is %d\n”,x,x);

}

Int main()

{

Char ch,t;

Printf(“Enter the character.\n”);

Scanf(“%c”,&ch);

Asc(ch);

Return 0;

}

**4.Convert a Person’s Name in Abbreviated**

//to print abbrevated name

#include<stdio.h>

Char name(char x[10],char y[10],char z[10])

{

Printf(“The abbrevated name is %c.%c.%s”,x[0],y[0],z);

}

Int main()

{

Char a[10],b[10],c[10],t;

Printf(“Enter the First Name, Middle name and last name:\n”);

Scanf(“%s\t%s\t%s”,a,b,c);

Name(a,b,c);

Return 0;

}

**5.Simple Interest**

//to find simple interest

#include<stdio.h>

Float s\_i(int x,int y,float z)

{

Float ar;

Ar=(x\*y\*z)/100.0f;

Return(ar);

}

Int main()

{

Int princi,time;

Float rate,t;

Printf(“-----Program to print simple interest-----\n”);

Printf(“Enter the Principle, Time and Rate.\n”);

Scanf(“%d\t%d\t%f”,&princi,&time,&rate);

T=s\_i(princi,time,rate);

Printf(“The Simple Interest is %f”,t);

Return 0;

}

**6.Percentage of 5 Subjects**

//to find percentage of 5

#include<stdio.h>

Float per(float g,float h,float I,float j,float k)

{

Float ar;

Ar=(g+h+i+j+k)/5;

Return(ar);

}

Int main()

{

Float a,b,c,d,e,t;

Printf(“-----Program to find percentage of 5 numbers-----\n”);

Printf(“Enter the marks in English.\n”);

Scanf(“%f”,&a);

Printf(“Enter the marks in Hindi.\n”);

Scanf(“%f”,&b);

Printf(“Enter the marks in Maths.\n”);

Scanf(“%f”,&c);

Printf(“Enter the marks in Science.\n”);

Scanf(“%f”,&d);

Printf(“Enter the marks in Social Science.\n”);

Scanf(“%f”,&e);

T=per(a,b,c,d,e);

Printf(“The percentage is: %.2f%%\n”,t);

Return 0;

}//to find percentage of 5

#include<stdio.h>

Float per(float g,float h,float I,float j,float k)

{

Float ar;

Ar=(g+h+i+j+k)/5;

Return(ar);

}

Int main()

{

Float a,b,c,d,e,t;

Printf(“-----Program to find percentage of 5 numbers-----\n”);

Printf(“Enter the marks in English.\n”);

Scanf(“%f”,&a);

Printf(“Enter the marks in Hindi.\n”);

Scanf(“%f”,&b);

Printf(“Enter the marks in Maths.\n”);

Scanf(“%f”,&c);

Printf(“Enter the marks in Science.\n”);

Scanf(“%f”,&d);

Printf(“Enter the marks in Social Science.\n”);

Scanf(“%f”,&e);

T=per(a,b,c,d,e);

Printf(“The percentage is: %.2f%%\n”,t);

Return 0;

}

**7.Converting Temperature Celsius into Fahrenheit**

//to convert temperature

#include<stdio.h>

Void temp1(float x)

{

Float ar;

Ar=((9/5)\*x)+32;

Printf(“The temperature in Farenheit is:%.2f\n”,ar);

}

Void temp2(float y)

{

Float arr;

Arr=((5/9.0f)\*(y-32));

Printf(“The temperature in Celcius is:%.2f\n”,arr);

}

Int main()

{

Float a,b;

Int ch;

Printf(“-----Program to Convert temperature-----\n”);

Printf(“Enter the choice:\n 1.Celcius to Farenheit.\n 2.Fraenheit to Celcius.\n”);

Scanf(“%d”,&ch);

Switch(ch)

{

Case 1:

{

Printf(“Enter the Temperature in Celcius:\n”);

Scanf(“%f”,&a);

Temp1(a);

}

Break;

Case 2:

{

Printf(“Enter the Temperature in Farenheit:\n”);

Scanf(“%f”,&b);

Temp2(b);

}

Break;

Default:printf(“Invalid Choice\n”);

}

Return 0;

}

**8.Factorial of a Given Number**

//to find factorial of number

#include<stdio.h>

Int fact(int);

Int fact(int a)

{

Int I,fact=1;

For(i=1;i<=a;i++)

{

Fact= fact\*I;

}

Return (fact);

}

Int main()

{

Int x,n;

Printf(“Enter the number to find factorial .\n”);

Scanf(“%d”,&n);

If(n<=0)

{

Printf(“Enter a greater number\n”);

}

Else

{

X=fact(n);

Printf(“The factorial of %d is %d.\n”,n,x);

}

Return 0;

}

**9.Factorial of a Given Number**

//to print first 3 powers of an integer

#include<stdio.h>

Int power(int a)

{

Int power;

Power= a\*a;

Return (power);

}

Int main()

{

Int x,n;

Printf(“Enter the Number.\n”);

Scanf(“%d”,&n);

If(n<=0)

{

Printf(“Enter a greater number\n”);

}

Else

{

Printf(“The 1st power of %d is %d.\n”,n,n);

X=power(n);

Printf(“The 2nd power of %d is %d.\n”,n,x);

Printf(“The 3rd power of %d is %d.\n”,n,(x\*n));

}

Return 0;

}

**10.Area of a Circle**

//to find area of circle

#include<stdio.h>

Float area(float x)

{

Float ar;

Ar= 3.14\*x\*x;

Return(ar);

}

Int main()

{

Float rad,t;

Printf(“Enter the radius of cicle.\n”);

Scanf(“%f”,&rad);

T=area(rad);

Printf(“The area of Ciracle is: %.2f\n”,t);

Return 0;

}

**11.The Greatest Number Among the Given Three Number**

//to find greater among three

#include<stdio.h>

Float greater(float x,float y,float z)

{

If(x>y&&x>z)

Return x;

Else if(y>x&&y>z)

Return y;

Else

Return z;

}

Int main()

{

Float a,b,c,t;

Printf(“Enter the number.\n”);

Scanf(“%f%f%f”,&a,&b,&c);

T=greater(a,b,c);

Printf(“The greater number is: %.2f\n”,t);

Return 0;

}

**12.The Number Is Positive or Negative**

//to find number is positive or negative

#include<stdio.h>

Float sign(float x)

{

If(x>0)

Printf(“the number is positive.\n”);

Else if(x<0)

Printf(“the number is negative.\n”);

Else

Printf(“the number is 0.\n”);

}

Int main()

{

Float a,t;

Printf(“enter the number.\n”);

Scanf(“%f”,&a);

T=sign(a);

Return 0;

}

**13 .Character Is Vowel or Consonant**

#include <stdio.h>

Void check(char);

Int main()

{

Char d;

Printf(“Enter an alphabet: “);

Scanf(“%c”,&d);

Check(d);

}

Void check (char c)

{

If (c == ‘a’ || c == ‘e’ || c == ‘I’ || c == ‘o’ || c == ‘u’)

Printf(“%c is a vowel.”, c);

Else if (c == ‘A’ || c == ‘E’ || c == ‘I’ || c == ‘O’ || c == ‘U’)

Printf(“%c is a vowel.”, c);

Else

Printf(“%c is a consonant.”, c);

Return 0;

}

**14.A Character Is an Alphabet or Not**

#include<stdio.h>

Void check (char);

Int main()

{

Char c;

Printf(“Enter the character : “);

Scanf(“%c”,&c);

Check©;

}

Void check(char c)

{

If(c>=’A’ && c<=’Z’)

Printf(“Character is an upper case\n”);

Else if(c>=’a’ && c<=’z’)

Printf(“Character is a lower case\n”);

Else if(c>=’0’&& c<=’9’)

Printf(“It is a digit\n”);

Else

Printf(“Character is a special character\n”);

Return 0;

}

**15.The Number Is Positive or Negative**

#include<stdio.h>

Void check(int);

Int main()

{

Int n;

Printf(“Enter an integer: “);

Scanf(“%d”, &n);

If(n==0)

Printf(“It is 0.”);

Else

Check(n);

}

Void check(int a)

{

If(a%2== 0)

Printf(“%d is Even.”, a);

Else

Printf(“%d is Odd.”, a);

Return 0;

}

**16.Greatest of Two Numbers**

#include<stdio.h>

Float check(float a,float b);

Int main()

{

Float a,b;

Printf(“Enter two numbers:\n”);

Scanf(“%f %f”,&a, &b);

Check(a,b);

}

Float check(float a,float b)

{

If(a>b)

Printf(“%.1f is greatest”,a);

Else if(b>a)

Printf(“%.1f is greatest”,b);

Else

Printf(“%.1f and %.1f are equal”, a,b);

Return 0;

}

**17.Greatest Among Three Numbers**

#include <stdio.h>

Int main() {

Double n1, n2, n3;

Printf(“Enter three numbers: “);

Scanf(“%lf %lf %lf”, &n1, &n2, &n3);

If (n1 >= n2 && n1 >= n3)

Printf(“%.2lf is the largest number.”, n1);

Else if (n2 >= n1 && n2 >= n3)

Printf(“%.2lf is the largest number.”, n2);

Else

Printf(“%.2lf is the largest number.”, n3);

Return 0;

}

**18.The Date Is Correct or Not**

#include <stdio.h>

Void check(int,int,int);

Int main()

{

Int d,m,y;

Printf(“Enter date in DD/MM/YYYY format: “);

Scanf(“%d/%d/%d”,&d,&m,&y);

Check(d,m,y);

}

Void check(int d,int m,int y)

{

If(y>=1900 && y<=10000)

{

If(m>=1 && m<=12)

{

If((d>=1 && d<=31) && (m==1 || m==3 || m==5 || m==7 || m==8 || m==10 || m==12))

Printf(“Date is correct.\n”);

Else if((d>=1 && d<=30) && (m==4 || m==6 || m==9 || m==11))

Printf(“Date is correct.\n”);

Else if((d>=1 && d<=28) && (m==2))

Printf(“Date is correct.\n”);

Else if(d==29&&m==2 &&(y%400==0||y%4==0)&&y%100!=0)

Printf(“Date is correct.\n”);

Else

Printf(“Day is correct.\n”);

}

Else

{

Printf(“Month is not correct.\n”);

}

}

Else

{

Printf(“Year is not correct.\n”);

}

Return 0;

}

**19.Voting Eligibility Checker**

#include<stdio.h>

Void check(int);

Int main()

{

Int a;

Printf(“Enter the age of the person: \n”);

Scanf(“%d”,&a);

If(a<0)

Printf(“Enter correct age: \n”);

Else

Check(a);

}

Void check(int a)

{

If (a>=18)

{

Printf(“Person is eigibal for voting.\n”);

}

Else

{

Printf(“Person is not eligibal for voting.\n”);

}

Return 0;

}

**20.Find the maximum between two numbers.**

#include<stdio.h>

Float check(float a,float b);

Int main()

{

Float a,b;

Printf(“Enter two numbers:\n”);

Scanf(“%f %f”,&a, &b);

Check(a,b);

}

Float check(float a,float b)

{

If(a>b)

Printf(“%.1f is greatest”,a);

Else if(b>a)

Printf(“%.1f is greatest”,b);

Else

Printf(“%.1f and %.1f are equal”, a,b);

Return 0;

}

**21.Find the maximum between the three numbers.**

#include <stdio.h>

Int main() {

Double n1, n2, n3;

Printf(“Enter three numbers: “);

Scanf(“%lf %lf %lf”, &n1, &n2, &n3);

If (n1 >= n2 && n1 >= n3)

Printf(“%.2lf is the largest number.”, n1);

Else if (n2 >= n1 && n2 >= n3)

Printf(“%.2lf is the largest number.”, n2);

Else

Printf(“%.2lf is the largest number.”, n3);

Return 0;

}

**22.Check whether a number is negative, positive or zero.**

#include<stdio.h>

Void check(int);

Int main()

{

Int n;

Printf(“Enter an integer: “);

Scanf(“%d”, &n);

Check(n);

}

Void check(int a)

{

If(a%2== 0)

Printf(“%d is Even.”, a);

Else if

Printf(“%d is Odd.”, a);

else

Printf(“It is 0.”);

Return 0;

}

**23.Check whether a number is divisible by 5 and 11 or not.**

#include <stdio.h>

Void check(int num)

{

If((num%5==0)&&(num%11==0))

{

Printf(“%d is divisible by 5 and 11”,num);

}

Else

{

Printf(“%d is not divisible by 5 and 11”,num);

}

Return 0;

}

Int main()

{

Int n;

Printf(“Enter any number: “);

Scanf(“%d”, &n);

If(n>0)

Check(n);

Else

Printf(“Enter valid number”);

}

**24.Find whether a number is even or odd.**

#include <stdio.h>

Int main()

{ unsigned int a;

Printf(“Enter a number:\n”);

Scanf(“%u”,&a);

If(a>=1&&a<=-1)

(a&1)?printf(“Number is Odd\n”):printf(“Number is Even\n”);

Else

Printf(“You have entered 0.\n”);

Return 0;

}

**25.Check whether a character is an alphabet or not.**

#include <stdio.h>

Void check(char);

Int main()

{

Char c;

Printf(“Enter a character: “);

Scanf(“%c”, &c);

Check©;

}

Void check(char a)

{

If ((a>=’a’&&a<=’z’)||(a>=’A’&&a<=’Z’))

Printf(“%c is an alphabet.”, a);

Else

Printf(“%c is not an alphabet.”,a);

Return 0;

}

**26.Check whether a character is an uppercase or lowercase alphabet.**

#include <stdio.h>

Void check(char);

Int main()

{

Char ch;

Printf(“Enter any character: “);

Scanf(“%c”, &ch);

Check(ch);

}

Void check(char ch)

{

If(ch>=’A’&&ch<=’Z’)

{

Printf(“’%c’ is in uppercase.”, ch);

}

Else if(ch>=’a’&&ch<=’z’)

{

Printf(“’%c’ is in lowercase.”, ch);

}

Else

{

Printf(“Enter a valid alphabet”);

}

Return 0;

}

**27.Input any alphabet and check whether it is vowel or consonant.**

#include <stdio.h>

Void check(char);

Int main()

{

Char d;

Printf(“Enter an alphabet: “);

Scanf(“%c”,&d);

Check(d);

}

Void check (char c)

{

If (c == ‘a’ || c == ‘e’ || c == ‘I’ || c == ‘o’ || c == ‘u’)

Printf(“%c is a vowel.”, c);

Else if (c == ‘A’ || c == ‘E’ || c == ‘I’ || c == ‘O’ || c == ‘U’)

Printf(“%c is a vowel.”, c);

Else

Printf(“%c is a consonant.”, c);

Return 0;

}

**28.Input any character and check whether it is the alphabet, digit or special character.**

#include <stdio.h>

Int main()

{

Char ch;

Printf(“Input a character: “);

Scanf(‘%c’, &ch);

If((ch>=’a’ && ch<=’z’) || (ch>=’A’ && ch<=’Z’))

{

Printf(“This is an alphabet.\n”);

}

Else if(ch>=’0’ && ch<=’9’)

{

Printf(“This is a digit.\n”);

}

Else

{

Printf(“This is a special character.\n”);

}

}

**29.Input week number and print weekday.**

#include <stdio.h>

Void check(int);

Int main()

{

Int w;

Printf(“Enter week number (1-7): \n”);

Scanf(“%d”, &w);

Check(w);

}

Void check(int week)

{

If(week==1)

{

Printf(“Monday”);

}

Else if(week==2)

{

Printf(“Tuesday”);

}

Else if(week==3)

{

Printf(“Wednesday”);

}

Else if(week == 4)

{

Printf(“Thursday”);

}

Else if(week == 5)

{

Printf(“Friday”);

}

Else if(week == 6)

{

Printf(“Saturday”);

}

Else if(week == 7)

{

Printf(“Sunday”);

}

Else

{

Printf(“Invalid Input\n”);

}

Return 0;

}

**30.Input month number and print number of days in that month.**

#include <stdio.h>

Void num\_of\_days(int n)

{

If(n==1||n==3||n==5||n==7||n==8||n==10||n==12)

{

Printf(“31 Days.\n”);

}

Else if(n==4||n==6||n==9||n==11)

{

Printf(“30 Days.\n”);

}

Else if(n==2)

{

Printf(“28/29 Days.\n”);

}

Else

{

Printf(“Invalid Month.\n”);

}

Return 0;

}

Int main()

{

Int num;

Printf(“Enter the number of month: \n”);

Scanf(“%d”,num);

If(num>0)

Num\_of\_days(num);

Else

Printf(“Invalid month number.\n”);

}

**31.Count the total number of notes in a given amount.**

/no of notes

#include <stdio.h>

Int main(){

Int amt;

Unsigned int n2000,n500, n100, n50, n20, n10, n5, n2, n1;

N2000=n500=n100=n50=n20=n10=n5=n2=n1=0;

Printf(“Enter amount: “);

Scanf(“%d”, &amt);

If(amt>=5){

If(amt>=2000)

{

N2000 = amt/2000;

Amt =amt%2000;

}

If(amt>=500)

{

N500 = amt/500;

Amt =amt%500;

}

If(amt>=100)

{

N100 = amt/100;

Amt =amt%100;

}

If(amt>=50)

{

N50 = amt/50;

Amt=amt%50;

}

If(amt>=20)

{

N20 = amt/20;

Amt= amt%20;

}

If(amt>=10)

{

N10 = amt/10;

Amt=amt%10;

}

If(amt>=5)

{

N5 = amt/5;

Amt=amt%5;

}

Printf(“Total number of notes = \n”);

Printf(“2000 = %u\n”, n2000);

Printf(“500 = %u\n”, n500);

Printf(“100 = %u\n”, n100);

Printf(“50 = %u\n”, n50);

Printf(“20 = %u\n”, n20);

Printf(“10 = %u\n”, n10);

Printf(“5 = %u\n”, n5);

If(amt<5)

Printf(“No notes for 1 and 2\n”);

}

Else

Printf(“Amount should greater then 5\n”);

Return 0;

}

**32.Input angles of a triangle and check whether the triangle is valid or not.**

#include <stdio.h>

Void check(int,int,int);

Int main()

{

Int a1, a2, a3;

Printf(“Enter Three Angles of a Triangle\n”);

Scanf(“%d %d %d”,&a1,&a2,&a3);

Check(a1,a2,a3);

}

Void check(int a1, int a2, int a3)

{

If((a1+a2+a3==180)&&a1!=180&&a2!=180&&a3!=180)

{

Printf(“It is a Valid Triangle\n”);

}

Else

{

Printf(“It is an invalid Triangle”);

}

Return 0;

}

**33.Input all sides of a triangle and check whether the triangle is valid or not.**

#include <stdio.h>

Void check(int,int,int);

Int main()

{

Int s1, s2, s3;

Printf(“Enter three sides of triangle: \n”);

Scanf(“%d%d%d”,&s1,&s2,&s3);

Check(s1,s2,s3);

}

Void check(int side1,int side2,int side3)

{

If((side1+side2)>side3)

{

If((side2+side3)>side1)

{

If((side1+side3)>side2)

{

Printf(“Triangle is valid.”);

}

Else

{

Printf(“Triangle is not valid.”);

}

}

Else

{

Printf(“Triangle is not valid.”);

}

}

Else

{

Printf(“Triangle is not valid.”);

}

Return 0;

}

**34.Check whether the triangle is an equilateral, isosceles or scalene triangle.**

#include <stdio.h>

int main()

{ float a,b,c;

printf("Enter the sides of triangle :\n");

scanf("%f%f%f",&a,&b,&c);

if(a==b&&a==c)

printf("Triangle is equilateral:\n");

else if(a==b||a==c||b==c)

printf("Triangle is isosceles :\n");

else

printf("Triangle is scalene \n");

return 0;

}

**35.Find all roots of a quadratic equation.**

#include <stdio.h>

#include <math.h>

Int main()

{

Float a, b, c;

Float root1, root2, imaginary;

Float discriminant;

Printf(“Enter values of a, b, c of quadratic equation (aX^2 + bX + c): “);

Scanf(“%f%f%f”, &a, &b, &c);

Discriminant = (b \* b) – (4 \* a \* c);

If(discriminant > 0)

{

Root1 = (-b + sqrt(discriminant)) / (2\*a);

Root2 = (-b – sqrt(discriminant)) / (2\*a);

Printf(“Two distinct and real roots exists: %.2f and %.2f”, root1, root2);

}

Else if(discriminant == 0)

{

Root1 = root2 = -b / (2 \* a);

Printf(“Two equal and real roots exists: %.2f and %.2f”, root1, root2);

}

Else if(discriminant < 0)

{

Root1 = root2 = -b / (2 \* a);

Imaginary = sqrt(-discriminant) / (2 \* a);

Printf(“Two distinct complex roots exists: %.2f + i%.2f and %.2f – i%.2f”,

Root1, imaginary, root2, imaginary);

}

Return 0;

}

**36.Calculate profit or loss.**

#include <stdio.h>

Void calc(int,int);

Int main()

{

Int cp,sp,amount;

Printf(“Enter cost price: “);

Scanf(“%d”,&cp);

Printf(“Enter selling price: “);

Scanf(“%d”,&sp);

Calc(cp,sp);

}

Void calc(int cp,int sp)

{

Int amount;

If(sp>cp)

{

Amount=sp-cp;

Printf(“Profit=%d”,amount);

}

Else if(cp>sp)

{

Amount = cp – sp;

Printf(“Loss = %d”,amount);

}

Else

{

Printf(“No Profit No Loss.”);

}

Return 0;

}

**37.Calculate Sum of Natural Numbers**

#include <stdio.h>

Int main()

{

Int sum=0,i=1n;

Printf(“Enter number.\n”);

Scanf(“%d”,&n);

While(i<=n)

{

Sum+=I;

i++;

}

Printf(“The sum is %d.\n”,sum);

Return 0;

}

**38.Temperature Conversion Celsius To Fahrenheit And Vice Versa**

//to convert temperature

#include<stdio.h>

Void temp1(float x)

{

Float ar;

Ar=((9/5)\*x)+32;

Printf(“The temperature in Farenheit is:%.2f\n”,ar);

}

Void temp2(float y)

{

Float arr;

Arr=((5/9.0f)\*(y-32));

Printf(“The temperature in Celcius is:%.2f\n”,arr);

}

Int main()

{

Float a,b;

Int ch;

Printf(“-----Program to Convert temperature-----\n”);

Printf(“Enter the choice:\n 1.Celcius to Farenheit.\n 2.Fraenheit to Celcius.\n”);

Scanf(“%d”,&ch);

Switch(ch)

{

Case 1:

{

Printf(“Enter the Temperature in Celcius:\n”);

Scanf(“%f”,&a);

Temp1(a);

}

Break;

Case 2:

{

Printf(“Enter the Temperature in Farenheit:\n”);

Scanf(“%f”,&b);

Temp2(b);

}

Break;

Default:printf(“Invalid Choice\n”);

}

Return 0;

}

**39.Find The Day**

#include <stdio.h>

Void check(int);

Int main()

{

Int w;

Printf(“Enter week number (1-7): \n”);

Scanf(“%d”, &w);

Check(w);

}

Void check(int week)

{

If(week==1)

{

Printf(“Monday”);

}

Else if(week==2)

{

Printf(“Tuesday”);

}

Else if(week==3)

{

Printf(“Wednesday”);

}

Else if(week == 4)

{

Printf(“Thursday”);

}

Else if(week == 5)

{

Printf(“Friday”);

}

Else if(week == 6)

{

Printf(“Saturday”);

}

Else if(week == 7)

{

Printf(“Sunday”);

}

Else

{

Printf(“Invalid Input\n”);

}

Return 0;

}

**40.Number of digits**

#include <stdio.h>

Void calc(int n)

{

Int temp =0;

While (n!=0);

{

N=n/10;

++temp;

}

Printf(“Number of digits: %d\n”, temp);

}

Int main()

{

Int n;

Printf(“Enter an integer: \n”);

Scanf(“%d”,&n);

Calc(n);

Return 0;

}

**41.Calculator**

//calculator

#include<stdio.h>

Void calc(int ch)

{

Float temp,x,y;

If(ch==1)

{

Printf(“Enter number to perform Addition.\n”);

Scanf(“%f%f”,&x,&y);

Temp=x+y;

Printf(“The Addition is %.2f.\n”,temp);

}

If(ch==2)

{

Printf(“Enter number to perform Substraction.\n”);

Scanf(“%f%f”,&x,&y);

Temp=x-y;

Printf(“The Substraction is %.2f.\n”,temp);

}

If(ch==3)

{

Printf(“Enter number to perform Multiplication.\n”);

Scanf(“%f%f”,&x,&y);

Temp=x\*y;

Printf(“The Multiplication is %.2f.\n”,temp);

}

If(ch==4)

{

Printf(“Enter number to perform Division.\n”);

Scanf(“%f%f”,&x,&y);

Temp=x/y;

Printf(“The Division is %.2f.\n”,temp);

}

}

Int main()

{

Int ch;

Printf(“Enter the number for operation:\n1.Addition\n2.Substraction\n3.Multiplication\n4.Division\n”);

Scanf(“%d”,&ch);

Switch(ch)

{

Case 1:

Calc(ch);

Break;

Case 2:

Calc(ch);

Break;

Case 3:

Calc(ch);

Break;

Case 4:

Calc(ch);

Break;

Default:

Printf(“Invalid Input.Please enter correct number.\n”);

}

Return 0;

}

**42.Find A Grade Of Given Marks or (Find a Grade of Given Marks Using Switch Case)**

#include<stdio.h>

Int main()

{

Int marks;

Printf(“Enter score out of 100: \n”);

Scanf(“%d”, &marks);

Switch( marks / 10 )

{

Case 10:

Case 9:

Printf(“Grade: A”);

Break;

Case 8:

Printf(“Grade: B”);

Break;

Case 7:

Printf(“Grade: C”);

Break;

Case 6:

Printf(“Grade: D”);

Break;

Case 5:

Printf(“Grade: E”);

Break;

Default:

Printf(“Grade: F”);

Break;

}

Return 0;

}

**43.Print total number of days in a month using switch case.**

#include <stdio.h>

Int main()

{

Int m;

Printf(“Enter month number(1-12): “);

Scanf(“%d”, &m);

Switch(m

{

Case 1:

Printf(“31 days”);

Break;

Case 2:

Printf(“28/29 days”);

Break;

Case 3:

Printf(“31 days”);

Break;

Case 4:

Printf(“30 days”);

Break;

Case 5:

Printf(“31 days”);

Break;

Case 6:

Printf(“30 days”);

Break;

Case 7:

Printf(“31 days”);

Break;

Case 8:

Printf(“31 days”);

Break;

Case 9:

Printf(“30 days”);

Break;

Case 10:

Printf(“31 days”);

Break;

Case 11:

Printf(“30 days”);

Break;

Case 12:

Printf(“31 days”);

Break;

Default:

Printf(“Invalid input! Please enter month number between 1-12”);

}

Return 0;

}

**44.Remove All Vowels From A String**

#include <stdio.h>

#include <string.h>

Int main()

{

Char str[100];

Int I,j,len=0;

Printf(“Enter a string : “);

Scanf(“%s”,str);

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’||str[i]==’E’||str[i]==’I’||str[i]==’O’||str[i]==’U’)

{

For(j=I;j<len;j++)

{

Str[j]=str[j+1];

}

i--;

len--;

}

Str[len+1]=’\0’;

}

Printf(“After deleting the vowels : %s”,str);

Return 0;

}

**45.Print day of week name using switch case.**

#include <stdio.h>

Void check(int);

Int main()

{

Int w;

Printf(“Enter week number (1-7): \n”);

Scanf(“%d”, &w);

Check(w);

}

Void check(int week)

{

If(week==1)

{

Printf(“Monday”);

}

Else if(week==2)

{

Printf(“Tuesday”);

}

Else if(week==3)

{

Printf(“Wednesday”);

}

Else if(week == 4)

{

Printf(“Thursday”);

}

Else if(week == 5)

{

Printf(“Friday”);

}

Else if(week == 6)

{

Printf(“Saturday”);

}

Else if(week == 7)

{

Printf(“Sunday”);

}

Else

{

Printf(“Invalid Input\n”);

}

Return 0;

}

**46.Check whether an alphabet is a vowel or consonant using a switch case.**

#include <stdio.h>

Int main()

{

Char ch;

Printf(“Enter a character: “);

Scanf(“%c”,&ch);

If((ch>=’A’&& ch<=’Z’)||(ch>=’a’ && ch<=’z’))

{

Switch(ch)

{

Case ‘A’:

Case ‘E’:

Case ‘I’:

Case ‘O’:

Case ‘U’:

Case ‘a’:

Case ‘e’:

Case ‘I’:

Case ‘o’:

Case ‘u’:

Printf(“%c is a VOWEL.\n”,ch);

Break;

Default:

Printf(“%c is a CONSONANT.\n”,ch);

}

}

Else

{

Printf(“%c is not an alphabet.\n”,ch);

}

Return 0;

}

**47.Find the maximum between two numbers using the switch case.**

#include <stdio.h>

Int main()

{

Int n1, n2;

Printf(“Enter two numbers to find maximum: “);

Scanf(“%d%d”, &n1, &n2);

Switch(n1>n2)

{

Case 0:

Printf(“%d is maximum”, n2);

Break;

Case 1:

Printf(“%d is maximum”, n1);

Break;

}

Return 0;

}

**48.Check whether a number is even or odd using a switch case.**

#include <stdio.h>

#include <stdlib.h>

Int main()

{

Int n1;

Printf(“Enter number: \n”);

Scanf(“%d”, &n1);

Switch(n1%2)

{

Case 0:

Printf(“%d is a even number\n”,n1);

Break;

Case 1:

Printf(“%d is a odd number\n”,n1);

Break;

}

Getch();

Return 0;

}

**49.Check whether a number is positive, negative or zero using a switch case.**

#include <stdio.h>

Int main()

{

Int num;

Printf(“Enter any number: “);

Scanf(“%d”, &num);

Switch (num > 0)

{

Case 1:

Printf(“%d is positive.”, num);

Break;

Case 0:

Switch (num < 0)

{

Case 1:

Printf(“%d is negative.”, num);

Break;

Case 0:

Printf(“%d is zero.”, num);

Break;

}

Break;

}

Return 0;

}

**50.Find roots of a quadratic equation using switch case.**

#include <stdio.h>

#include <math.h>

Int main()

{

Float a, b, c;

Float r1, r2, img, discriminant;

Printf(“Enter value of ‘a’ of quadratic equation (aX^2 + bX + c): “);

Scanf(“%f”, &a);

Printf(“Enter value of ‘b’ of quadratic equation (aX^2 + bX + c): “);

Scanf(“%f”,&b);

Printf(“Enter values of ‘c’ of quadratic equation (aX^2 + bX + c): “);

Scanf(“%f”,&c);

Discriminant = (b \* b) – (4 \* a \* c);

Switch(discriminant > 0)

{

Case 1:

{ r1 = (-b + sqrt(discriminant)) / (2 \* a);

R2 = (-b – sqrt(discriminant)) / (2 \* a);

Printf(“Two distinct and real roots exists: %.2f and %.2f”,

R1, r2);

Break;

}

Case 0:

Switch(discriminant < 0)

{

Case 1:

R1 = r2 = -b / (2 \* a);

Img = sqrt(-discriminant) / (2 \* a);

Printf(“Two distinct complex roots exists: %.2f + i%.2f and %.2f – i%.2f”,

R1, img, r2, img);

Break;

Case 0:

R1=r2=-b/(2\*a);

Printf(“Two equal and real roots exists: %.2f and %.2f”, r1,r2);

Break;

}

}

Return 0;

}

**51.Create a Simple Calculator using a switch case.**

//calculator

#include<stdio.h>

Void calc(int ch)

{

Float temp,x,y;

If(ch==1)

{

Printf(“Enter number to perform Addition.\n”);

Scanf(“%f%f”,&x,&y);

Temp=x+y;

Printf(“The Addition is %.2f.\n”,temp);

}

If(ch==2)

{

Printf(“Enter number to perform Substraction.\n”);

Scanf(“%f%f”,&x,&y);

Temp=x-y;

Printf(“The Substraction is %.2f.\n”,temp);

}

If(ch==3)

{

Printf(“Enter number to perform Multiplication.\n”);

Scanf(“%f%f”,&x,&y);

Temp=x\*y;

Printf(“The Multiplication is %.2f.\n”,temp);

}

If(ch==4)

{

Printf(“Enter number to perform Division.\n”);

Scanf(“%f%f”,&x,&y);

Temp=x/y;

Printf(“The Division is %.2f.\n”,temp);

}

}

Int main()

{

Int ch;

Printf(“Enter the number for operation:\n1.Addition\n2.Substraction\n3.Multiplication\n4.Division\n”);

Scanf(“%d”,&ch);

Switch(ch)

{

Case 1:

Calc(ch);

Break;

Case 2:

Calc(ch);

Break;

Case 3:

Calc(ch);

Break;

Case 4:

Calc(ch);

Break;

Default:

Printf(“Invalid Input.Please enter correct number.\n”);

}

Return 0;

}

**52.Insert An Element Desired or Specific**

#include<stdio.h>

Int main(){

Int st[40],pos,I,size,value;

Printf(“enter no of elements in array of students:”);

Scanf(“%d”,&size);

Printf(“enter %d elements are:\n”,size);

For(i=0;i<size;i++)

Scanf(“%d”,&st[i]);

Printf(“enter the position where you want to insert the element:”);

Scanf(“%d”,&pos);

If(pos<size)

{

Printf(“enter the value into that poition:”);

Scanf(“%d”,&value);

For(i=size-1;i>=pos-1;i--)

{

St[i+1]=st[i];

}

St[pos-1]= value;

Printf(“final array after inserting the value is\n”);

For(i=0;i<=size;i++)

Printf(“%d\n”,st[i]);

}

Else

Printf(“No such position exist in array.\n”);

Return 0;

}

**53.Remove Duplicates Items In An Array**

#include<stdio.h>

#include<stdlib.h>

Int main(){

Int a[50],I,j,k, count = 0,num;

Printf(“Enter size of the array\n”);

Scanf(“%d”,&num);

Printf(“Enter Elements of the array:\n”);

For(i=0;i<num;i++){

Scanf(“%d”,&a[i]);

}

Printf(“Entered element are: \n”);

For(i=0;i<num;i++){

Printf(“%d “,a[i]);

}

For(i=0;i<num;i++){

For(j = i+1; j < num;j++)

{

If(a[i] == a[j]){

For(k = j; k <num; k++){

A[k] = a[k+1];

}

j--;

num--;

}

}

}

Printf(“\nAfter deleting the duplicate element the Array is:\n”);

For(i=0;i<num;i++){

Printf(“%d”,a[i]);

}

}

**54.Delete element in array**

#include <stdio.h>

Int main()

{

Int arr[100];

Int I, size, pos;

Printf(“Enter size of the array : “);

Scanf(“%d”,&size);

Printf(“Enter elements in array : “);

For(i=0; i<size; i++)

{

Scanf(“%d”,&arr[i]);

}

Printf(“Enter the element position to delete : “);

Scanf(“%d”, &pos);

If(pos < 0 || pos > size)

{

Printf(“Invalid position! Please enter position between 1 to %d”, size);

}

Else

{

For(i=pos-1; i<size-1; i++)

{

Arr[i] = arr[I + 1];

}

Size--;

Printf(“\nElements of array after delete are : “);

For(i=0; i<size; i++)

{

Printf(“%d\t”, arr[i]);

}

}

Return 0;

}

**55.Check String Is Palindrome Or Not Using For Loop**

#include <stdio.h>

#include <string.h>

Int main()

{

Char str[100];

Int I,len,flag;

Flag=0;

Printf(“\n Please Enter any String : “);

Fgets(str,100,stdin);

Len=strlen(str);

For(i=0;i<len;i++)

{

If(str[i]!=str[len-i-1])

{

Flag=1;

Break;

}

}

If(flag==0)

{

Printf(“\n %s is a Palindrome.\n”,str);

}

Else

{

Printf(“\n %s is Not a Palindrome.\n”,str);

}

Return 0;

}

**56.Convert All Input String Simultaneously Into Asterisk ( \* )**

#include<stdio.h>

#include<string.h>

Int main()

{

Int i=0,n;

Char str[55];

Printf(“Enter string:\n”);

Fgets(str,55,stdin);

N=strlen(str);

For(I;i<n-1;i++)

{

If((str[i]!=’\0’)&&(str[i]!=’ ‘))

Printf(“\*”);

Else

Printf(“ “);

}

Getch();

}

**57.Read and print elements of the array. – using recursion.**

#include<stdio.h>

Void print\_arr(int arr[],int I,int n)

{

If(i>=n)

Return;

Printf(“%d “,arr[i]);

Print\_arr(arr,i+1,n);

}

Int main()

{

Int n,I;

Printf(“Enter size of array:\n”);

Scanf(“%d”,&n);

Int arr[n];

Printf(“Enter the Array Elements:\n”);

For(i=0;i<n;i++)

{

Scanf(“%d”,&arr[i]);

}

Printf(“The array is:\n”);

Print\_arr(arr,0,n);

}

**58.Print all negative elements in an array.**

#include <stdio.h>

Int main()

{

Int a[100],I,n;

Printf(“Enter size of the array : “);

Scanf(“%d”,&n);

Printf(“Enter elements in array : “);

For(i=0;i<n;i++)

{

Scanf(“%d”,&a[i]);

}

Printf(“\nAll negative elements of array are : “);

For(i=0;i<n;i++)

{

If(a[i]<0)

{

Printf(“%d\t”,a[i]);

}

}

Return 0;

}

**59.Sum of all array elements. – using recursion.**

#include <stdio.h>

Int sum(int arr[], int start, int len);

Int main()

{

Int n, I, sumofarray;

Printf(“Enter size of the array: “);

Scanf(“%d”, &n);

Int arr[n];

Printf(“Enter elements in the array: “);

For(i=0; i<n; i++)

{

Scanf(“%d”, &arr[i]);

}

Sumofarray = sum(arr,0,n);

Printf(“Sum of array elements: %d”, sumofarray);

Return 0;

}

Int sum(int arr[], int start, int len)

{

If(start >= len)

Return 0;

Return (arr[start]+sum(arr,start+1,len));

}

**60.Character,digit or special character**

#include<stdio.h>

Void check (char);

Int main()

{

Char c;

Printf(“Enter the character : “);

Scanf(“%c”,&c);

Check©;

}

Void check(char c)

{

If(c>=’A’ && c<=’Z’)

Printf(“Character is an upper case\n”);

Else if(c>=’a’ && c<=’z’)

Printf(“Character is a lower case\n”);

Else if(c>=’0’&& c<=’9’)

Printf(“It is a digit\n”);

Else

Printf(“Character is a special character\n”);

Return 0;

}

**61.Find a maximum and minimum element in an array. – using recursion.**

#include <stdio.h>

Int maxnum(int array[], int, int);

Int minnum(int array[], int, int);

Int main()

{

Int array[100],num,max,min,I;

Printf(“Enter size of the array:\n”);

Scanf(“%d”,&num);

Printf(“Enter %d elements in array:\n”, num);

For(i=0;i<num;i++)

{

Scanf(“%d”,&array[i]);

}

Max = maxnum(array,1,num);

Min = minnum(array,1,num);

Printf(“Minimum element in array: %d\n”, min);

Printf(“Maximum element in array: %d\n”, max);

Return 0;

}

Int maxnum(int array[],int I,int len)

{

Int max;

For(I;i<len;)

{

If(array[i]>array[i+1])

{

Max=array[i];

}

Maxnum(array,i+1,len);

}

Return (max);

}

Int minnum(int array[],int I,int len)

{

Int max;

For(I;i<len;)

{

If(array[i]<array[i+1])

{

Max=array[i];

}

Maxnum(array,i+1,len);

}

Return (max);

}

**62.Get the second largest element in an array.**

#include <stdio.h>

#include <limits.h>

Int main()

{

Int size, i;

Int m1, m2;

Printf(“Enter size of the array : \n “);

Scanf(“%d”, &size);

Int arr[n];

Printf(“Enter elements in the array: “);

For(i=0; i<size; i++)

{

Scanf(“%d”, &arr[i]);

}

M1 = m2 = 0;

For(i=0; i<size; i++)

{

If(arr[i] >m1)

{

M2 =m1;

M1 = arr[i];

}

Else if(arr[i] > m2 && arr[i] <m1)

{

M2 = arr[i];

}

}

Printf(“Second largest = %d”, m2);

Return 0;

}

**63.Count the total number of even and odd elements in an array.**

#include <stdio.h>

Int main()

{

Int arr[100];

Int I, size, even, odd;

Printf(“Enter size of the array: “);

Scanf(“%d”, &size);

Printf(“Enter %d elements in array: “, size);

For(i=0; i<size; i++)

{

Scanf(“%d”, &arr[i]);

}

Even = 0;

Odd = 0;

For(i=0; i<size; i++)

{

If(arr[i]%2 == 0)

{

Even++;

}

Else

{

Odd++;

}

}

Printf(“Total even elements: %d\n”, even);

Printf(“Total odd elements: %d”, odd);

Return 0;

}