1. **Write a simple program that prints the results of all the operators available in C (including pre/ post increment, bitwise and/or/not, etc.). Read required operand values from standard input**.

#include <stdio.h>

int main()

{

int a,b;

printf("enter the values of a and b\n");

scanf("%d%d",&a,&b);

printf("\na+b=%d",a+b);

printf("\na-b=%d",a-b);

printf("\na\*b=%d",a\*b);

printf("\na/b=%d",a/b);

printf("\na%b=%d",a%b);

printf("\na>b=%d",a>b);

printf("\na>=b=%d",a>=b);

printf("\na<b=%d",a<b);

printf("\na<=b=%d",a<=b);

printf ("\na==b=%d",a==b);

printf("\na&&b=%d",a&&b);

printf("\na||b=%d",a||b);

printf("\na!=b=%d",a!=b);

printf("\na++=%d",a++);

printf("\na--=%d",a--);

printf("\n++a=%d",++a);

printf("\n --a=%d",--a);

printf("\na&b=%d",a&b);

printf("\na|b=%d",a|b);

printf("\n~a=%d",~a);

printf("\na>>2=%d",a>>2);

printf("\n b<<3=%d",b<<3);

return 0;

}

1. **Write a simple program that converts one given data type to another using auto conversion and casting. Take the values form standard input.**

#include <stdio.h>

int main()

{

int i = 17, sum = 17, count = 5;

char c = 'c'; /\* ascii value is 99 \*/

int add;

double mean;

add= i + c; //auto conversion

printf("Value of add : %d\n", add);

mean = (double) sum/count; //casting

printf("Value of mean : %f\n", mean );

return 0;

}

1. **Write a program for find the max and min from the three numbers.**

#include<stdio.h>

int main()

{

int a,b,c;

printf("Enter 3 numbers:\n");

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

if(a>b && a>c)

printf("\nMaximum number is a = %d",a);

else if(b>a && b>c)

printf("\nMaximum number is b = %d",b);

else

printf("\nMaximum number is c = %d",c);

if(a<b && a<c)

printf("\nMinimum number is a = %d",a);

else if(b<a && b<c)

printf("\nMinimum number is b = %d",b);

else

printf("\nMinimum number is c = %d",c);

return 0;

}

1. **Write the program for the simple, compound interest**

#include<stdio.h>

#include<math.h>

int main()

{

float p,q,r,SI,CI;

int t;

printf("\nEnter the value of Principal p ");

scanf("%f",&p);

printf("\nEnter the value of Rate r ");

scanf("%f",&r);

printf("\nEnter the value of Period in year n = ");

scanf("%d",&t);

SI = ((p\*r\*t)/100);

printf("Simple Interest SI=%f \n",SI);

q = 1+(r/100);

CI=p\*pow(q,t)-p;

printf("Compound Interest CI=%f \n",CI);

return 0;

}

1. **Write program that declares Class awarded for a given percentage of marks, where mark <40%= Failed, 40% to <60% = Second class, 60% to <70%=First class, >= 70% = Distinction. Read percentage from standard input**.

#include <stdio.h>

int main()

{

int per;

printf("Enter your mark ");

scanf("%d",&per);

if(per >= 70)

{

printf(" distinction"); // printing outputs

}

else if ( (per >=60)&&(per<70))

{

printf(" First class");

}

else if ( (per >=40)&&(per<60))

{

printf(" second class");

}

else if ( per< 40)

{

printf(" Failed in the exam");

}

return 0;

}

1. **Write a program that prints a multiplication table for a given number and the number of rows in the table. For example, for a number 5 and rows = 3**

include<stdio.h>

int main()

{

int num, i = 1,n;

printf("Enter any Number:");

scanf("%d", &num);

printf("\nEnter the number of rows");

scanf("%d",&n);

printf("Multiplication table of %d: ", num);

while (i <= n)

{

printf("\n%d x %d = %d", num, i, num \* i);

i++;

}

return 0;

}

1. **Write a C program, which takes two integer operands and one operator from the user, performs the operation and then prints the result. (Consider the operators +,-,\*, /, % and use Switch Statement**

#include <stdio.h>

int main()

{

int a, b, c;

char ch;

printf("Enter your operator(+, -, /, \*, %)\n");

scanf("%c", &ch);

printf("Enter the values of a and b\n");

scanf("%d%d", &a, &b);

switch(ch)

{

case '+': c = a + b;

printf("addition of two numbers is %d", c);

break;

case '-': c = a - b;

printf("substraction of two numbers is %d", c);

break;

case '\*': c = a \* b;

printf("multiplication of two numbers is %d", c);

break;

case '/': c = a / b;

printf("remainder of two numbers is %d", c);

break;

case '%': c = a % b;

printf("quotient of two numbers is %d", c);

break;

default: printf("Invalid operator");

break;

}

return 0;

}

1. **Write a program that finds if a given number is a prime number**

#include <stdio.h>

int main()

{

int n, i, flag = 0;

printf("Enter a positive integer: ");

scanf("%d",&n);

for(i=2; i<=n/2; ++i)

{

if(n%i==0)

{

flag=1;

break;

}

}

if (flag==0)

printf("%d is a prime number.",n);

else

printf("%d is not a prime number.",n);

return 0;

}

1. **Write a C program to find the sum of individual digits of a positive integer**

#include <stdio.h>

int main()

{

int num,rem,sum=0;

printf("enter a positive integer");

scanf("%d",&num);

while(num>0)

{

rem=num%10;

sum=sum+rem;

num=num/10;

}

printf("sum of digits of %d",sum);

return 0;

}

1. **Write a C program to test given number is palindrome.**

#include <stdio.h>

int main()

{

int num,rem,sum=0,temp;

printf("enter a positive integer");

scanf("%d",&num);

temp=num;

while(num>0)

{

rem=num%10;

sum=sum\*10+rem;

num=num/10;

}

if(temp==sum)

printf("%d is pallindrome",temp);

else

printf("%d is not pallindrome",temp);

return 0;

}

**A Fibonacci sequence is defined as follows: the first and second terms in the sequence are 0 and 1. Subsequent terms are found by adding the preceding two terms in the sequence. Write a C program to generate the first n terms of the sequence**

#include <stdio.h>

int main()

{

int i,a=0,b=1,c,n;

printf("enter the limit of fibinocci series");

scanf("%d",&n);

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

{

c=a+b;

a=b;

b=c;

printf("%d\t",c);

}

return 0;

}