

Output

forward number
358

reversed number
853

Program - 1

Write a program to prompt the user to input 3 values and print these values in forward and reversed order.

```
#include <iostream.h>
#include <conio.h>
void main()
{
    int a=3, b=5, c=8;
    cout << "forward number ";
    cout << a << b << c;
    cout << "reversed number ";
    cout << c << b << a;
    getch();
}
```

Output

Subject	Marks
Mathematics	90
Computer	77
Chemistry	69

Topic _____

Date _____

Program-2

Write a program to display the following output using simple cout statement

```
Subject      90
Mathematics
Computer     77
Chemistry    69
```

```
#include <iostream>
#include <iomanip>
```

```
int main()
```

```
{
```

```
    cout << "Subject" << " | Marks" << " | \n Mathematics" << " | 90" << " | \n Computer" << " | 77" << " | \n Chemistry" << " | 69" << " | \n";
```

```
    return 0;
```

```
}
```

Program - 3

es Write a program to swap the values of two variables.

ion #include <iostream.h>

#include <conio.h>

class swap
{

public:

int a, b, c;

void input ()
{

cout << "Enter the first number ";

Cin >> a;

cout << "Enter the second number";

Cin >> b;

}

void displayswap ()
{

c = a;

a = b;

b = c;

cout << "Number after swap=" << a << b;

};

void main ()

{

Swap obj;

Output

Enter the first number 6
Enter the second number 4
Number after swap 4 6

Topic _____

obj.inout C);
obj.display swap C);
getche C);
3

OUTPUT

Enter number 7
odd no

Program-4

Write a program to find a given number is odd or even.

```
#include <iostream.h>
#include <conio.h>
void main ()
{
    clrscr();
    int a;
    cout << "Enter number ";
    cin >> a;
    if (a % 2 == 0)
        cout << "even no ";
    else
        cout << "odd no ";
    getch();
}
```

Shruti
26/8/23

Output

Enter the number 6
Enter the second number 7
addition is 13

Program - 5

Write a program using class for addition of two numbers.

```
#include <iostream.h>
```

```
#include <conio.h>
```

```
class add
```

```
{ public:
```

```
int a,b,m;
```

```
void input() {
```

```
cout << "Enter the number ";
```

```
cin >> a;
```

```
cout << "Enter the second number ";
```

```
cin >> b;
```

```
} void displayadd()
```

```
{
```

```
x = a + b;
```

```
cout << "addition is " << x;
```

```
}
```

```
void main()
```

```
{
```

```
add obj;
```

```
obj.input();
```

```
obj.displayadd();
```

```
getche();
```

```
}
```

OUTPUT

Enter the first number 6
Enter the second number 4
Sum of two number is: 10
Subtraction of two number is: 2
Multiplication of two number is: 24
Division of two number is: 0.2

Topic _____

Date _____

Program-6

Write a program in C++ to perform all arithmetic operations.

#include <iostream.h>

#include <iomanip.h>

void main()

{

int a, b;

clrscr();

cout << "Enter the first number";

cin >> a;

cout << "Enter the second number";

cin >> b;

cout << "Sum of two number is: " << a+b;

cout << "Subtraction of two number is: " << a-b;

cout << "Multiplication of two number is: " << a*b;

cout << "Division of two number is: " << a/b;

getche();

}

21/9/23

OUTPUT

The value of num is 1

Topic _____

Date _____

8

Program-7

Write a Program to Access Static Member function using class name in C++.

```
#include <iostream.h>
#include <conio.h>
```

```
class note
```

```
{
```

```
    static int num;
```

```
public:
```

```
    static int fun()
```

```
{
```

```
    return num;
```

```
}
```

```
int note::num;
```

```
int main()
```

```
{
```

```
    clrscr();
```

```
    cout << "The value of num is: " << note::fun() << endl;
```

```
    getch();
```

```
}
```


Program - 8

Ques Write a Program to design a class having static Member function showcount which has Property of Displaying the number of object.

```
#include <iostream.h>
```

```
#include <conio.h>
```

```
class test
```

```
{
```

```
    int code;
```

```
    static int count;
```

```
public:
```

```
    void setcode (void)
```

```
{
```

```
        code = ++count;
```

```
}
```

```
    void showcode (void)
```

```
{
```

```
        cout << "object number:" << code;
```

```
}
```

```
    static void showcount (void)
```

```
{
```

```
        cout << "count:" << count;
```

```
    };
```

```
int test::count;
```

```
void main()
```

```
{
```

Output

cout: 2 cout: 3 Object Number: 1
Object Number: 2 Object Number: 3

Topic

```
class C;  
test t1, t2;  
t1.setcode (C);  
t2.setcode (C);  
test:: Showcount (C);  
test t3;  
t3.setcode (C);  
test:: Showcount (C);  
t1.Showcode (C);  
t2.Showcode (C);  
t3.Showcode (C);  
getthe (C);  
}
```

Program - 9

Ques Write a program to print side of cube using default constructor.

```
⇒ #include <iostream.h>  
#include <conio.h>
```

```
class cube
```

```
{
```

```
private:
```

```
int side;
```

```
public:
```

```
cube ()
```

```
{
```

```
side = 6;
```

```
cout << "Cube" << side;
```

```
};
```

```
int main ()
```

```
{
```

```
cube c;
```

```
getche();
```

```
}
```

Ans

Output

Cube

Program - 10

Ques Write a Program using parameter constructor.

```
#include <iostream>
#include <conio.h>
```

```
class rectangle
{
```

```
private:
```

```
int len, bre;
```

```
public:
```

```
rectangle (int a, int b)
```

```
{
    len = a;
```

```
    bre = b;
```

```
}
int area()
```

```
{
```

```
    int a;
```

```
    a = len * bre;
```

```
    cout << a;
```

```
}
}
```

```
void main()
```

```
{
```

```
    class r;
```

```
    rectangle r1(5, 6);
```

```
    r1.area();
```

```
    getch();
```

```
}
```


Output

10
10

Topic

Program-11

Date

15

Q Write a program using copy constructor.

```
#include <iostream.h>
#include <conio.h>
```

```
class counter;
```

```
{
```

```
int count;
```

```
public:
```

```
counter (int c) {
```

```
{ count = c;
```

```
} counter (counter &ob)
```

```
{
```

```
count = ob.count;
```

```
void show ()
```

```
{
```

```
count <= count;
```

```
}};
```

```
int main ()
```

```
{ counter c1 (10);
```

```
counter c2 (c1);
```

```
c1.show();
```

```
c2.show();
```

```
getche ();
```

```
return 0;
```

```
}
```

Break

OUTPUT

Count of object with id 1 sum
 Count of object with id 2 sum
 Count of object with id 3 sum
 End of main
 Object with id 3 destroyed
 Object with id 2 destroyed
 Object with id 1 destroyed

Topic _____

Date _____

Program-12

ques

```

#include <iostream.h>
#include <conio.h>
class Counter
{
    int idi;
public:
    Counter(int i)
    {
        id = i;
        cout << "Count of object with id " << id << " sum ";
        ~Counter()
        {
            cout << " object with id " << id << " destroyed ";
        }
    }
    int main()
    {
        Counter C1(1);
        Counter C2(2);
        Counter C3(3);
        cout << " End of Main ";
        return 0;
    }
  
```

OUTPUT

The sum of the value is 11

Topic _____

Date _____

Program - 13

Program to implement friend function

```
#include <iostream.h>
#include <conio.h>
class friend
{
    int a, b;
public:
    friend int sum(friend x);
    void set(int w, int q)
    {
        a = w;
        b = q;
    }
    int sum(friend x)
    {
        return x.a + x.b;
    }
};

int main()
{
    friend x;
    x.set(5, 6);
    cout << "The sum of the value is: " << sum(x);
    getch();
    return 0;
}
```

Ans.

OUTPUT

Constructor with zero parameters
called

0
25
56

Q. Write a Program of Constructor Overloading.

class rectangle

{ Private:

int length, breadth;

Public:

rectangle()

{ length = breadth = 0;

cout << "Constructor with zero parameters called\n";

} rectangle(int a)

{ length = breadth = a;

cout << "\n";

} rectangle(int a, int b)

{ length = a;

breadth = b;

cout << "\n";

} }

int area()

{ return (length * breadth)

} int main()

{

rectangle r1;

rectangle r2(5);

rectangle r3(7,8);

getche();

}

Ans

Program

Ques Write a Program by implementing Virtual Function.

#include <iostream.h>

#include <conio.h>

class base

{

public:

virtual void display () // Virtual Keyword & word

{ cout << "Base class display";

}

class deriv1 : public base // Derived class

{

public:

void display ()

{ cout << "Deriv1 class display";

}

class deriv2 : public base // 2nd Derived class

{

public:

void display ()

{ cout << "Deriv2 class display";

}

int main ()

{ class();

base * ptr; // pointer created

deriv1 d1;

deriv2 d2;

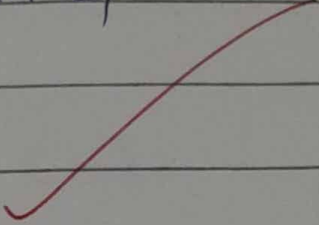
ptr = &d1;

ptr -> display ();

Output

Deriv1 class display Deriv2 class display.

```
ptr = & d2;  
ptr -> display();  
getche();  
return 0;  
}
```



Lecture

Q. Write a Program in C++ implementing single inheritance.

```
#include <iostream.h>
```

```
#include <conio.h>
```

```
class student // Base Class
```

```
{ int rollno;
```

```
char name [10];
```

```
public:
```

```
void getdata()
```

```
{ cout << "Enter rollno and name";
```

```
cin >> rollno >> name;
```

```
}
```

```
void display()
```

```
{ cout << "Student details:";
```

```
cout >> name >> rollno;
```

```
};
```

```
class test : public student // Derived Class of Base Class
```

```
{
```

```
int sub1, sub2;
```

```
public:
```

```
void readdata()
```

```
{
```

```
getdata();
```

```
cout << "Enter sub marks";
```

```
cin >> sub1 >> sub2;
```

```
}
```

```
void putdata()
```

```
{
```

OUTPUT

Enter rollno and name 64 Abc
Student details

Age 64

Enter submarks 94 64

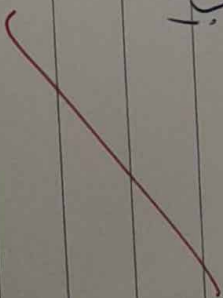
Student marks are
94 64



Topic _____

Date _____

```
display C);  
cout << " Student marks are :";  
cout << sub1 << sub2;  
}};  
void main C)  
{  
clear C);  
test obj1;  
obj1.maddata C);  
obj2.putdata C);  
getche C);  
}
```



by

Q Write a program to implement Multiple inheritance.

```
#include <iostream.h>
```

```
#include <conio.h>
```

```
class student // Base class
```

```
{
```

```
int rollno;
```

```
char name [10];
```

```
public:
```

```
void getdata()
```

```
{ cout << "Enter the rollno and name : \n";
```

```
cin >> rollno >> name;
```

```
}
```

```
void getdata display()
```

```
{
```

```
cout << "student details: \n";
```

```
cout << rollno << name;
```

```
}};
```

```
class sports // 2nd Base class
```

```
{ char game [20];
```

```
public:
```

```
void getgame()
```

```
{ cout << "enter name of game \n";
```

```
cin >> game;
```

```
}
```

```
void putgame()
```

```
{ cout << "In name of the game : \n";
```

```
cout << game;
```

```
}};
```

Output

Enter the rollno and name
45
Student
Enter name of game
baseball
Enter sub marks
56
78
Student details:
45 abc
name of the game:
baseball
Student marks:
56 78

Topic

Derived class of Base class
class der : public student, public sports

```
{
    public:
        int sub1, sub2;
        void readdata()
    }
```

```
{
    getdata();
    getgame();
    cout << "Enter sub marks\n";
    cin >> sub1 >> sub2;
    void putdata()
    }
```

```
{
    display();
    putgame();
    cout << "In student marks:\n";
    cout << sub1 << sub2;
    }
    void main()
    {
        }
```

```
{
    class C;
    test obj;
    obj1.readdata();
    obj2.putdata();
    obj2.getche();
    }
```

11/11/21

Date

Output
Sum=16 Sum=15

Sum=8.8

Page No.

Program to use Function template

Date

23

```
// write a C++ Program  
#include <iostream>  
#include <conio.h>  
#include <cmath>  
using namespace std;  
template <typename T>  
void sum (T x, T y)
```

{
T result;

result = x + y;

cout << "Sum = " << result;

int main ()

{

sum (7, 9);

sum (5, 10);

sum (4.5, 4.3);

return 0;

}

~~Accepted~~
2/3/24

OUTPUT

$x = 8.28$ $y = d$ $x = 7$ $y = 75.38$

Program to use function template

```
// Write a C++ program with multiple parameters.  
#include <iostream.h>  
#include <conio.h>  
using namespace std;  
template < class T1, class T2 >  
void display (T1, T2, T2)  
{  
    cout << "x = " << x << endl;  
    cout << "y = " << y << endl;  
}  
void main()  
{  
    clrscr();  
    display (8.28, 'd');  
    display (7, 75.38);  
    getch();  
}
```

~~Program~~
24/03/24

OUTPUT
x=7 y=9

Program for class template.

```
#include <iostream.h>
#include <conio.h>
using namespace std;

class sample
{
    int x;
    int y;

public:
    void getdata (TA, TB)
    {
        x = TA;
        y = TB;
    }

    void display ()
    {
        cout << "x = " << x;
        cout << "y = " << y;
    }
};

void main ()
{
    sample s1, s2;
    s1.getdata (7, 9);
    s1.display ();
    s2.getdata ();
    s2.display ();
}
```

25/10/21

the use of Non-type

Write a program to illustrate the use of Non-type

#include <iostream.h>

#include <conio.h>

#include <conio.h> int size;

template

class sample

{ public:

void getData ()

{ cout << "Enter the array elements: "

for (int i=0; i<size; i++)

cin >> a[i];

} void display ()

{ cout << "Array Elements are: "

for (int j=0; j<size; j++)

cout << a[j];

}

} int main ()

{ sample s;

s.getData ();

s.display ();

getch ();

}

}

}

}

}

}

}

Output

Enter the array elements:

6 7 8 9 1 2 5

Array elements are:

6 7 8 9 1 2 5