**// Function -> Without Return type With Argument**

#include<iostream>

using namespace std;

class sum

{

int n1,n2,n3;

public:

void input();

void process(int,int);

void output();

};

void sum ::input()

{

cout<<"enter 2 no.s";

cin>>n1>>n2;

process(n1,n2);

}

void sum:: process(int x,int y)

{

n3=x+y;

}

void sum:: output()

{

cout<<"Result is:"<<n3;

}

int main()

{

sum s;

s.input();

s.output();

return 0;

}

**// Function -> Without Return type Without Argument**

#include<iostream>

using namespace std;

class sum

{

int n1,n2,n3;

public:

void input();

void process();

void output();

};

void sum ::input()

{

cout<<"enter 2 no.s";

cin>>n1>>n2;

}

void sum:: process()

{

n3=n1+n2;

}

void sum:: output()

{

cout<<"Result is:"<<n3;

}

int main()

{

sum s;

s.input();

s.process();

s.output();

return 0;

}

**// Function -> With Return type With Argument**

#include<iostream>

using namespace std;

class sum

{

int n1,n2,n3,n4;

public:

void input();

int process(int,int);

void output();

};

void sum ::input()

{

cout<<"enter 2 no.s";

cin>>n1>>n2;

n3=process(n1,n2);

}

int sum:: process(int x, int y)

{

n4=x+y;

return n4;

}

void sum:: output()

{

cout<<"Result is:"<<n3;

}

int main()

{

sum s;

s.input();

//s.process();

s.output();

return 0;

}

**// Function -> With Return type Without Argument**

#include<iostream>

using namespace std;

class sum

{

int n1,n2,n3,n4;

public:

void input();

int process();

void output();

};

void sum ::input()

{

cout<<"enter 2 no.s";

cin>>n1>>n2;

n3=process();

}

int sum:: process()

{

n4=n1+n2;

return n4;

}

void sum:: output()

{

cout<<"Result is:"<<n3;

}

int main()

{

sum s;

s.input();

//s.process();

s.output();

return 0;

}

**// Object as an Argument**

**// Function -> Without Return type With Argument**

#include<iostream>

using namespace std;

class sum

{

int n1,n2,n3;

public:

void input();

void process(sum ,sum );

void output();

};

void sum ::input()

{

cout<<"enter 2 no.s";

cin>>n1>>n2;

//process(n1,n2);

}

void sum:: process(sum x,sum y)

{

n3=x.n1+y.n2;

}

void sum:: output()

{

cout<<"Result is:"<<n3;

}

int main()

{

sum s;

s.input();

s.process(s,s);

s.output();

return 0;

}

**// Object as an Argument (As an Address)**

**// Function -> Without Return type With Argument**

#include<iostream>

using namespace std;

class sum

{

int n1,n2,n3;

public:

void input();

void process(sum\* ,sum\* );

void output();

};

void sum ::input()

{

cout<<"enter 2 no.s";

cin>>n1>>n2;

//process(n1,n2);

}

void sum:: process(sum \*x,sum \*y)

{

n3=x->n1+y->n2;

}

void sum:: output()

{

cout<<"Result is:"<<n3;

}

int main()

{

sum s;

s.input();

s.process(&s,&s);

s.output();

return 0;

}

**//Clearly Understand About the use of friend function**

#include<iostream>

using namespace std;

class about\_friend

{

char name[10];

int age;

float cgpa;

public:

void input();

friend void output(about\_friend);

};

void about\_friend :: input()

{

cout<<"enter the name, age and cgpa of student";

cin>>name>>age>>cgpa;

}

void output(about\_friend a)

{

cout<<"Name is:"<<a.name<<endl<<"Age is:"<<a.age<<endl<<"Cgpa is:"<<a.cgpa;

}

int main()

{

about\_friend af;

af.input();

output(af);

return 0;

}

**// Object as an Argument**

**// Function -> Without Return type With Argument**

#include<iostream>

using namespace std;

class sum

{

int n1,n2,n3;

public:

void input();

void process();

friend void output(sum);

};

void sum ::input()

{

cout<<"enter 2 no.s";

cin>>n1>>n2;

}

void sum:: process()

{

n3=n1+n2;

}

void output(sum s)

{

cout<<"Result is:"<<s.n3;

}

int main()

{

sum s;

s.input();

s.process();

output(s);

return 0;

}

**//Clearly Understand About the use of friend function**

#include<iostream>

using namespace std;

class my\_friend;

class about\_friend

{

char name[30];

int age;

float cgpa;

public:

void input();

friend void output(about\_friend, my\_friend);

};

class my\_friend

{

char address[30];

public:

void input();

friend void output(about\_friend, my\_friend);

};

void about\_friend :: input()

{

cout<<"enter the name, age and cgpa of student";

cin>>name>>age>>cgpa;

}

void my\_friend :: input()

{

cout<<"enter the address of student";

cin>>address;

}

void output(about\_friend a, my\_friend b)

{

cout<<"Name is:"<<a.name<<endl<<"Age is:"<<a.age<<endl<<"Cgpa is:"<<a.cgpa<<endl<<"Addresss is:"<<b.address<<endl;

}

int main()

{

about\_friend af;

my\_friend mf;

af.input();

mf.input();

output(af,mf);

return 0;

}

**// Factorial of n = 1\*2\*3\*...\*n**

#include <iostream>

using namespace std;

class recursive\_factorial

{

int n, result;

public:

void input();

int factorial(int);

void output();

};

void recursive\_factorial::input()

{

cout << "Enter a non-negative number: ";

cin >> n;

result=factorial(n);

}

int recursive\_factorial::factorial(int n)

{

if (n > 1)

{

return n \* factorial(n - 1);

}

else

{

return 1;

}

}

void recursive\_factorial::output()

{

cout << "Factorial of " << n << " = " << result;

}

int main()

{

recursive\_factorial r;

r.input();

r.output();

return 0;

}

**//Array of Objects with Friend function**

#include<iostream>

using namespace std;

class about\_friend

{

char name[10];

int age;

float cgpa;

public:

void input();

friend void output(about\_friend);

};

void about\_friend :: input()

{

cout<<"enter the name, age and cgpa of student";

cin>>name>>age>>cgpa;

}

void output(about\_friend a)

{

cout<<"Name is:"<<a.name<<endl<<"Age is:"<<a.age<<endl<<"Cgpa is:"<<a.cgpa<<endl;

}

int main()

{

about\_friend af[2];

for(int i=0;i<2;i++)

{

af[i].input();

output(af[i]);

}

return 0;

}