

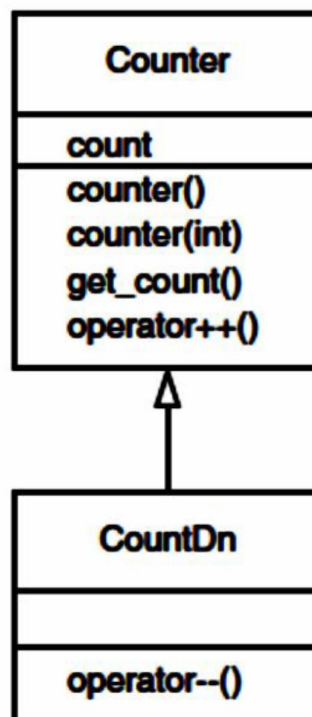
The Unified Modeling Language (UML)

The base class	class title (عنوان (اسم الفئة)
	attributes (member data) (صفات (بيانات العضو)
	operations (member functions) (العمليات (دوال العضو)



The derived class	class title (عنوان (اسم الفئة)
	attributes (member data) (صفات (بيانات العضو)
	operations (member functions) (العمليات (دوال العضو)

Ex:- Convert the following UML diagram into its corresponding object oriented C++ program?



Solution:-

```
#include <iostream >
using namespace std;
class Counter
{
protected:
int count; //count
public:
Counter (): count (0) //constructor
{ }
void inc_count() //increment count
{ count++; }
int get_count() //return count
{ return count; }
};
class CountDn : public Counter //derived class
{
public:
void dec_count()
{ count--; }
};
int main()
{
CountDn c1; //c1 of class CountDn
cout << "\nc1=" << c1.get_count(); //display
c1.inc_count(); //increment c1
c1.inc_count(); //increment c2
c1.inc_count(); //increment c2
cout << "\n after increment c1=" << c1.get_count(); //display again
```

```
c1.dec_count();  
c1.dec_count();  
cout << "\n after decrement c1=" << c1.get_count(); //display again  
return 0;  
}
```