

```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

    Base (int x,int y,int z)
    { ... }

    int Fun ()
    { return X+
      Y+
      Z; }
};

int Main ()
{
    Base O1;
    O1.X = X
    O1.Y = X
    O1.Z = ✓
    1;
}

class Derived : Base
{
    int A;
    Protected:
    int B;
    Public:
    int C;
    Derived (int a,int b,int c,
    int a ,int b , int c):...
    { ... }

    int Fun()
    { return A+
      B+
      C+
      X+
      Y+
      Z; }
};

Derived O2;
O2.X = X
O2.Y = X
O2.Z = depends on inheritance type
O2.A = X
O2.B = X
O2.C = ✓
2;

class Derived02 : Derived
{
    int K;
    protected:
    int L;
    Public:
    int M;
    Derived2 (.....) {}

    int Fun ()
    { return K+
      L+
      M+
      A+
      B+
      C+
      X+
      Y+
      Z; }
};

Derived02 O3;
O3.X = X
O3.Y = X
O3.Z = depends on inheritance type
O3.A = X
O3.B = X
O3.C = depends on inheritance type
O3.K = ✓
O3.L = X
O3.M = ✓
3;

```

0. Regardless of Inheritance Type

1. Public , Public
2. Protected , Protected
3. Private , Private
4. Public , Private
5. Protected , Public
6. private , protected
7. private , public
8. protected , private
9. public , protected

```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

```

```

class Derived :    Base
{
    int A;
    Protected:
    int B; Y
    Public:
    int C; Z
    Derived (int a, int b, int c,
    int a, int b, int c) ...
    { ... }

```

```

class Derived02 :    Derived
{
    int K;
    protected:
    int L; B, Y
    Public:
    int M; C, Z
    Derived2 (....) {}

```

```

Base (int x, int y, int z)
{ ... }

```

```

int Fun ()
{ return X + ✓
  Y + ✓
  Z; } ✓

```

```

int Fun()
{ return A + ✓
  B + ✓
  C + ✓
  X + ✗
  Y + ✓
  Z; } ✓

```

```

int Fun ()
{ return K + ✓
  L + ✓
  M + ✓
  A + ✗
  B + ✓
  C + ✓
  X + ✗
  Y + ✓
  Z; } ✓

```

```

};

```

```

int Main ()
{

```

```

    Base O1;
    O1.X = ✗
    O1.Y = ✗
    O1.Z = ✓
    1;

```

```

    };
    Derived O2;
    O2.X = ✗
    O2.Y = ✗
    O2.Z = ✓
    O2.A = ✗
    O2.B = ✗
    O2.C = ✓
    2;

```

```

    Derived02 O3;
    O3.X = ✗
    O3.Y = ✗
    O3.Z = ✓
    O3.A = ✗
    O3.B = ✗
    O3.C = ✓
    O3.K = ✗
    O3.L = ✗
    O3.M = ✓
    3;

```

- ✓ 1. Public, Public
 2. Protected, Protected
 3. Private, Private
 4. Public, Private
 5. Protected, Public
 6. private, protected
 7. private, public
 8. protected, private
 9. public, protected

```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

    Base (int x,int y,int z)
    { ... }

    int Fun ()
    { return X+ ✓
      Y+ ✓
      Z; } ✓
};

int Main ()
{
    Base O1;
    O1.X = ✗
    O1.Y = ✗
    O1.Z = ✓
    1;
}

class Derived :   Base
{
    int A;
    Protected:
    int B; Y, Z
    Public:
    int C;
    Derived (int a,int b,int c,
             int a ,int b , int c) : ...
    { ... }

    int Fun()
    { return A+ ✓
      B+ ✓
      C+ ✓
      X+ ✗
      Y+ ✓
      Z; } ✓
};

class Derived02 :   Derived
{
    int K;
    protected:
    int L; B, Y, Z, C
    Public:
    int M;
    Derived2 (.....) {}

    int Fun ()
    { return K+ ✓
      L+ ✓
      M+ ✓
      A+ ✗
      B+ ✓
      C+ ✓
      X+ ✗
      Y+ ✓
      Z; } ✓
};

Derived O2;
O2.X = ✗
O2.Y = ✗
O2.Z = ✗
O2.A = ✗
O2.B = ✗
O2.C = ✓
2;

Derived02 O3;
O3.X = ✗
O3.Y = ✗
O3.Z = ✗
O3.A = ✗
O3.B = ✗
O3.C = ✗
O3.K = ✗
O3.L = ✗
O3.M = ✓
3;

```

1. Public , Public
- ✓ 2. Protected , Protected
3. Private , Private
4. Public , Private
5. Protected , Public
- 6- private , protected
- 7- private , public
- 8- protected , private
- 9- public , protected

```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

    Base (int x,int y,int z)
    { ... }

    int Fun ()
    { return X+ ✓
      Y+ ✓
      Z; } ✓
};

int Main ()
{
    Base O1;
    O1.X = ✗
    O1.Y = ✗
    O1.Z = ✓
    1;
}

class Derived : Private Base
{
    int A; , Y, Z
    Protected:
    int B;
    Public:
    int C;
    Derived (int a,int b,int c,
    int a ,int b , int c):...
    { ... }

    int Fun()
    { return A+ ✓
      B+ ✓
      C+ ✓
      X+ ✗
      Y+ ✓
      Z; } ✓
};

Derived O2;
O2.X = ✗
O2.Y = ✗
O2.Z = ✗
O2.A = ✗
O2.B = ✗
O2.C = ✓
2;

class Derived02 : Protected Derived
{
    int K; , B, C
    protected:
    int L;
    Public:
    int M;
    Derived2 (....) {}

    int Fun ()
    { return K+ ✓
      L+ ✓
      M+ ✓
      A+ ✗
      B+ ✓
      C+ ✓
      X+ ✗
      Y+ ✗
      Z; } ✗
};

Derived02 O3;
O3.X = ✗
O3.Y = ✗
O3.Z = ✗
O3.A = ✗
O3.B = ✗
O3.C = ✗
O3.K = ✗
O3.L = ✗
O3.M = ✓
3;

```

1. Public , Public
2. Protected , Protected
- ✓ 3. Private , Private
4. Public , Private
5. Protected , Public
6. private , protected
7. private , public
8. protected , private
9. public , protected

```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

    Base (int x,int y,int z)
    { ... }

    int Fun ()
    { return X+✓
      Y+✓
      Z; }✓
};

int Main ()
{
    Base O1;
    O1.X = ✗
    O1.Y = ✗
    O1.Z = ✓
};

class Derived: Base
{
    int A;
    Protected:
    int B; Y
    Public:
    int C; Z
    Derived (int a,int b,int c,
             int a ,int b , int c) ...
    { ... }

    int Fun()
    { return A+✓
      B+✓
      C+✓
      X+ ✗
      Y+✓
      Z; }✓
};

class Derived02: Derived
{
    int K; B,Y,C,Z
    protected:
    int L;
    Public:
    int M;
    Derived2 (.....) {}

    int Fun ()
    { return K+✓
      L+✓
      M+✓
      A+ ✗
      B+✓
      C+✓
      X+ ✗
      Y+✓
      Z; }✓
};

Derived O2;
O2.X = ✗
O2.Y = ✗
O2.Z = ✓
O2.A = ✗
O2.B = ✗
O2.C = ✓
2'

Derived02 O3
O3.X = ✗
O3.Y = ✗
O3.Z = ✗
O3.A = ✗
O3.B = ✗
O3.C = ✗
O3.K = ✗
O3.L = ✗
O3.M = ✓
3;

```

1. Public , Public
2. Protected , Protected
3. Private , Private
- ✓ 4. Public , Private
5. Protected , Public
- 6- private ,protected
- 7- private ,public
- 8- protected ,private
- 9- public ,protected

```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

    Base (int x,int y,int z)
    {...}

    int Fun ()
    { return
        X+✓
        Y+✓
        Z;}✓
};

int Main ()
{
    Base O1;
    O1.X = ✗
    O1.Y = ✗
    O1.Z = ✓
1:
}

class Derived : Public Base
{
    int A;
    Protected:
    int B; ,Y,Z
    Public:
    int C;
    Derived (int a,int b,int c,
    int a ,int b , int c):...
    {...}

    int Fun()
    { return A+✓
        B+✓
        C+✓
        X+ ✗
        Y+✓
        Z;}✓
};

Derived O2;
O2.X = ✗
O2.Y = ✗
O2.Z = ✗
O2.A = ✗
O2.B = ✗
O2.C = ✓
2:
}

class Derived02 : Protected Derived
{
    int K;
    protected:
    int L; ,B,Y,Z
    Public:
    int M; ,C
    Derived2 (.....) {}

    int Fun ()
    { return K+✓
        L+✓
        M+✓
        A+ ✗
        B+✓
        C+✓
        X+ ✗
        Y+✓
        Z;}✓
};

Derived02 O3;
O3.X = ✗
O3.Y = ✗
O3.Z = ✗
O3.A = ✗
O3.B = ✗
O3.C = ✓
O3.K = ✗
O3.L = ✗
O3.M = ✓
3:
}

```

1. Public , Public
2. Protected , Protected
3. Private , Private
4. Public , Private
- ✓ 5. Protected , Public
- 6- private ,protected
- 7- private ,public
- 8- protected ,private
- 9- public ,protected


```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

    Base (int x,int y,int z)
    {...}

    int Fun ()
    { return X+✓
      Y+✓
      Z;}✓
};

int Main ()
{
    Base O1;
    O1.X = ✗
    O1.Y = ✗
    O1.Z = ✓
    1;
}

class Derived :   Base
{
    int A; Y, Z
    Protected:
    int B;
    Public:
    int C;
    Derived (int a,int b,int c ,
    int a ,int b , int c):...
    {...}

    int Fun()
    { return A+✓
      B+✓
      C+✓
      X+ ✗
      Y+ ✓
      Z;}✓
};

class Derived02 :   Derived
{
    int K;
    protected:
    int L; B, C
    Public:
    int M;
    Derived2 (.....) {}

    int Fun ()
    { return K+✓
      L+✓
      M+✓
      A+ ✗
      B+ ✓
      C+ ✓
      X+ ✗
      Y+ ✗
      Z;}✗
};

Derived O2;
O2.X = ✗
O2.Y = ✗
O2.Z = ✗
O2.A = ✗
O2.B = ✗
O2.C = ✓
2;

Derived02 O3
O3.X = ✗
O3.Y = ✗
O3.Z = ✗
O3.A = ✗
O3.B = ✗
O3.C = ✗
O3.K = ✗
O3.L = ✗
O3.M = ✓
3;

```

1. Public , Public
2. Protected , Protected
3. Private , Private
4. Public , Private
5. Protected , Public
- ✓ 6- private , protected
- 7- private , public
- 8- protected , private
- 9- public , protected

```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

    Base (int x,int y,int z)
    {...}

    int Fun ()
    { return X+✓
      Y+✓
      Z; }✓
};

int Main ()
{
    Base O1;
    O1.X = ✗
    O1.Y = ✗
    O1.Z = ✓
    1;
}

class Derived :   Base
{
    int A; , Y, Z
    Protected:
    int B;
    Public:
    int C;
    Derived (int a,int b,int c,
    int a ,int b , int c):...
    {...}

    int Fun()
    { return A+✓
      B+✓
      C+✓
      X+ ✗
      Y+ ✓
      Z; }✓
};

class Derived02 :   Derived
{
    int K;
    protected:
    int L; , B
    Public:
    int M; , C
    Derived2 (.....) {}

    int Fun ()
    { return K+✓
      L+✓
      M+✓
      A+ ✗
      B+ ✓
      C+ ✓
      X+ ✗
      Y+ ✗
      Z; } ✗
};

Derived02 O3
O3.X = ✗
O3.Y = ✗
O3.Z = ✗
O3.A = ✗
O3.B = ✗
O3.C = ✓
O3.K = ✗
O3.L = ✗
O3.M = ✓
3;

Derived O2;
O2.X = ✗
O2.Y = ✗
O2.Z = ✗
O2.A = ✗
O2.B = ✗
O2.C = ✓
2'

```

1. Public , Public
2. Protected , Protected
3. Private , Private
4. Public , Private
5. Protected , Public
- 6- private , protected
- ✓ 7- private , public
- 8- protected , private
- 9- public , protected


```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

    Base (int x,int y,int z)
    {...}

    int Fun ()
    { return X+✓
      Y+✓
      Z;}✓
};

int Main ()
{
    Base O1;
    O1.X = ✗
    O1.Y = ✗
    O1.Z = ✓
};

```

```

class Derived :    Base
{
    int A;
    Protected:
    int B; , Y, Z
    Public:
    int C;
    Derived (int a,int b,int c ,
    int a ,int b , int c):...
    {...}

    int Fun()
    { return A+✓
      B+✓
      C+✓
      X+ ✗
      Y+✓
      Z;}✓
};

```

```

class Derived02 :    Derived
{
    int K; , B, Y, Z, C
    protected:
    int L;
    Public:
    int M;
    Derived2 (.....) {}

    int Fun ()
    { return K+✓
      L+✓
      M+✓
      A+ ✗
      B+✓
      C+✓
      X+ ✗
      Y+✓
      Z;}✓
};

```

```

Derived O2;
O2.X = ✗
O2.Y = ✗
O2.Z = ✗
O2.A = ✗
O2.B = ✗
O2.C = ✓
2'
.

```

```

Derived02 O3
O3.X = ✗
O3.Y = ✗
O3.Z = ✗
O3.A = ✗
O3.B = ✗
O3.C = ✗
O3.K = ✗
O3.L = ✗
O3.M = ✓
3;

```

1. Public , Public
2. Protected , Protected
3. Private , Private
4. Public , Private
5. Protected , Public
- 6- private , protected
- 7- private , public
- ✓ 8- protected , private
- 9- public , protected

```

class Base
{
    int X;
    Protected:
    int Y;
    public:
    int Z;

    Base (int x,int y,int z)
    { ... }

    int Fun ()
    { return X+✓
      Y+✓
      Z; }✓
};

int Main ()
{
    Base O1;
    O1.X = ✗
    O1.Y = ✗
    O1.Z = ✓
};

class Derived : Base
{
    int A;
    Protected:
    int B; Y
    Public:
    int C; Z
    Derived (int a,int b,int c,
    int a ,int b , int c):...
    { ... }

    int Fun()
    { return A+✓
      B+✓
      C+✓
      X+ ✗
      Y+✓
      Z; }✓
};

class Derived02 : Derived
{
    int K;
    protected:
    int L; B, Y, C, Z
    Public:
    int M;
    Derived2 (....) {}

    int Fun ()
    { return K+✓
      L+✓
      M+✓
      A+ ✗
      B+✓
      C+✓
      X+ ✗
      Y+✓
      Z; }✓
};

Derived O2;
O2.X = ✗
O2.Y = ✗
O2.Z = ✓
O2.A = ✗
O2.B = ✗
O2.C = ✓
2'

Derived02 O3
O3.X = ✗
O3.Y = ✗
O3.Z = ✗
O3.A = ✗
O3.B = ✗
O3.C = ✗
O3.K = ✗
O3.L = ✗
O3.M = ✓
3;

```

1. Public , Public
2. Protected , Protected
3. Private , Private
4. Public , Private
5. Protected , Public
- 6- private , protected
- 7- private , public
- 8- protected , private
- ✓ 9- public , protected