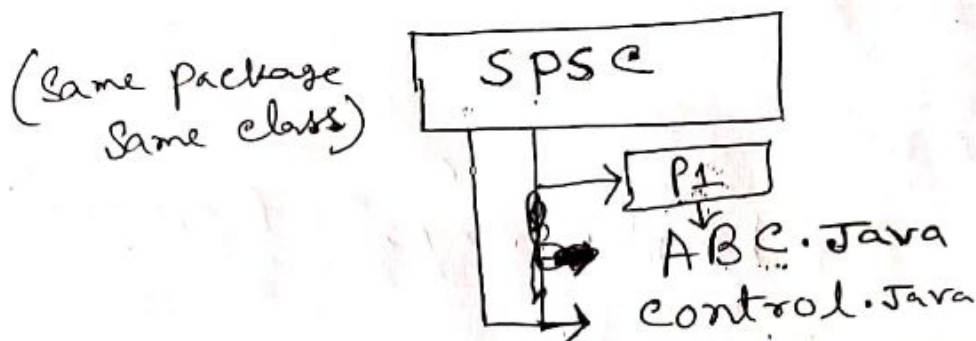Folder → consists of files + Sub folder

Package → consists of classes + Subclasses

Access specifier → public ✓
→ Private
→ protected
Default

(Same package, Same class)

SPSC

P1

ABC.Java
control.Java

(P1)

ABC.Java

~~B~~ package P1;

public class ABC

{

~~public~~ ~~~~

Public int a = 10;
Protected int b = 20;
Private int c = 30;
int d = 40;

}

```java
void show()
{
    S.o.pln("Public = "+a);
    s.o.pln("Protected = "+b);
    S.o.pln("Private = "+c);
    S.o.pln("Default = "+d);
}
}
}
```

control. Java (main)

```java
import P1.*;
class control
{
    Public static void main (String as[])
    {
        ABC ob = new ABC();
        ob.show();
    }
}
```

CMD :-

E:\SPSC> Javac ✗ Control.Java↵

E:\SPSC> Java ✗ control ↵

---

output ⟶

    Public = 10
    Protected = 20
    Private = 30
    Default = 40

Private   ~~Protected~~ Default   ~~Do~~ Protected Public
   ✓   ✓   ✓   ✓

(Same package Sub class)

| SPSUC |

⟶ | P.1 |

(extends) ⟶ ABC·Java
          ⟶ XYZ· Java

⟶ control· Java

```
package P1;
public class ABC
{
        public    int  a = 10;
        protected int  b = 20;
        private  int   c = 30;
                 int   d = 40;



}
```

XYZ.Java

```
package P1;
public class XYZ extends
                        ABC
{
        void Show()
        {
            S.O.pln("public = " + a);
            S.O.pln("Protected = " + b);
        //  S.O.pln("Private = " + c);
            S.O.pln("Default = " + d);
        }
}
```

Control . Java (main)

```
import P1.*;
class Control
{
    public static void main(
                        String as[])
    {
        XYZ ob = new XYZ();
        ob.show();
    }
}
```

CMD →

E:\SPSUC> Javac Control.Java
E:\SPSUC> Java Control

output:-
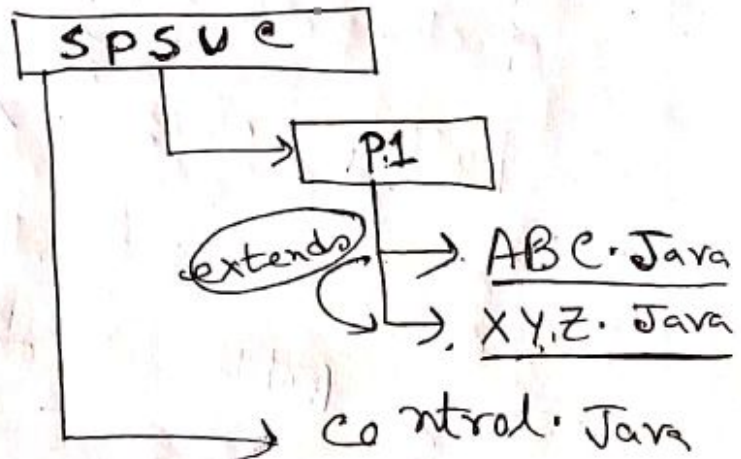
Public = 10
Protected = 20
~~Private = 30~~
Default = 40

Private   Default   Protected Public
  X   ✓   ✓   ✓

(Same package
Non sub
class

SP NSC

→ P1

object → ↳ ABC. Java
       ↳ XYZ. Java

↳ control. Java

ABC. Java

package P1;

public ~~cl~~ class ABC

{
          public int a = 10;
          Protected int b = 20;
       ⊕ Private int c = 30;
          int d = 40;

}

→ ↗ ← (without inheritance) →

XYZ. Java

package P1;
public class XYZ

{

```java
        public int    a = 10;
        protected int b = 20;
        private   int c = 30;
                  int d = 40;
    }

    void  show()
    {
        ABc ob = new ABc();
        S.O.pln(" public =  "+ob.a);
        S.O.pln(" Protected = "+
                                ob.b);
    //  S.O.pln(" Private = "+
                                ob.c);
        S.O.pln(" Default = "+
                                ob.d);
    }
}
```

CMD

```
public = 10
Protected = 20
Default = 40
```

Private   Protected   Protected public
   X   Default   ✓   ✓

(Different
package
Subclass
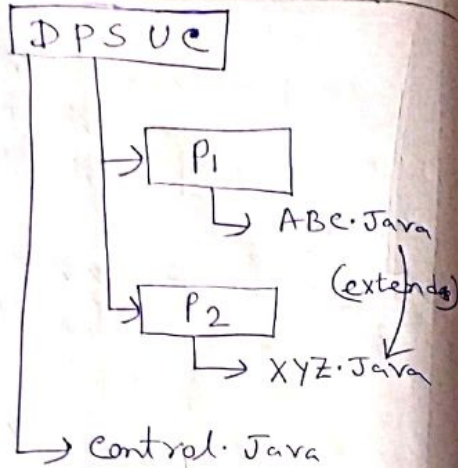
```
┌─────────────┐
│  D P S U C  │
└─────────────┘
    │    │
    │    └──→ ┌──────┐
    │        │  P1  │
    │        └──────┘
    │            └──→ ABC.Java
    │                  (extends)
    │        ┌──────┐
    │    └──→ │  P2  │
    │        └──────┘
    │            └──→ XYZ.Java
    │
    └──→ control. Java
```

ABC. Java

Package P1;

public class ABC
{
    public int a = 10;
    protected int b = 20;
    private int c = 30;
    int d = 40;
}

control. Java

import P1.*;
       " P2.*;
class controlB {
    P S v m (String
                args[])
    XYZ ob = new XYZ();
    ob. show();
}

XYZ.Java

package P2;
import P1.*;

public class XYZ extends
                        ABC
{
    public void show()
    {
        s.o.pln ("Public = "+a);
        s.o.pln ("Protected = "+b);
        //s.o.pln ("private = "+c);
        //s.o.pln ("Default = "+d);
    }
}

cmd   E:\DPSUC> Javae & control.
                              Javad
      E:\DPSUC> Java & controld

output   public = 10
              protected = 20

Private   Default   Public   Public
                                      protected
  X   X   ✓   ✓

Scanned with CamScanner

Different
package
Non
sub class

DPNSUC

P1 $\quad$ (N^o inherite)
$\hookrightarrow$ ABC. Java

P2 $\quad$ (object)
$\hookrightarrow$ XYZ. Java

$\longrightarrow$ control. Java

ABC. Java

package P1;
public class ABC
{
    public int a = 10;
    protected int b = 20;
    private int c = 30;
    int d = 40;
}

XYZ. Java

```java
package p2;
import p1.*;
public class XYZ
{
    void show()
    {
        ABC ob = new ABC();
        S.O.pln("public = " + ob.a);
        // S.O.pln("Protected = " + ob.b);
        // S.O.pln("Private = " + ob.c);
        // S.O.pln("Default = " + ob.d);
    }
}
```

---

control. Java

```java
import p1.*;
import p2.*;
class control
{
    p1  S  v  main (String as[]
    {
```

```
        XYZ    ob = new XYZ();
      ob.show();
    3
  3
```

_____→ b

<u>CMD</u>

E:\DPNSUe> Jarae b
                    Control.
                        Javad

E:\DPNSUe>. Java b control

_____→ b

output :-

public = 10

private   Befault   Proteeted
   X   X   X

                        public