

Java Source File Structure:

Class Definition and Declaration:

Q. How many class we can take in a java program?

1. A java program can take any number of classes

```
class A{ }
```

```
class B{ }
```

```
class C{ }
```

```
class D{ }
```

Q. Which class name will be considered for saving the name of the file.

Code-1

A.java

B.java

C.java

D.java

KK.java

We can take any name to save this code, the code will compile without error.

2. How many public classes we can take in java program?

Only one public class is declared in one java program. If there is public class in java program then the name of the class should be as the name of the class which is declared as public.

Code-2

```
class A{ }
```

```
public class B { }
```

```
class C{ }
```

```
class D { }
```

Note: A java program can contain any number of classes but atmost one class can be declared as public. More than one public class is not allowed because, Because it is public and can be accessed from outside by any one.

If there is no public class then there is no restriction we can take any name for saving the file in java. If we take two public class then compiler will give left and right. More than one public class is not allowed in one java program.

```
class A{ }
```

```
public class B{ }
```

```
public class C{ }
```

```
class D{ }
```

Compile time error.

3. Which name should I give to this program?

Code-3

```
class A{ }
```

```
class B{ }
```

```
class C{ }
```

```
class D{ }
```

- **Frequent Answer will come from your side:** The class which contains main method, that name we should take as the name of class for the file name.
- **There is no relation between the class which contains main() method and the name of the file. Only two things are important the public class and the name of the file should be matched.**

4. Can we have multiple class having main method in single program

Code-4

```
class A{

    public static void main(String args[]){
        System.out.println(" A Class  main");
    }
}

class B{

    public static void main(String args[]) {
        System.out.println(" B Class  main");
    }
}

class C{

    public static void main(String args[]) {
        System.out.println(" C Class  main");
    }
}

class D{ }
```

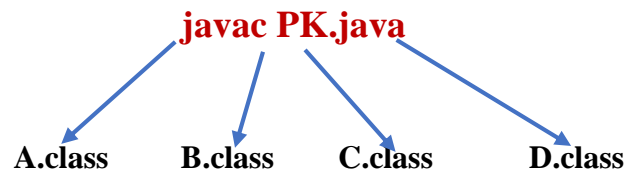
1. Assume this as single program, Which name I have to use for this program?

We can use any name because there is no public class. I will use PK.java because there is no public class.

2. When I want to compile this program Which main will be executed in this program.

3.How many .class will be generated? 4. classes will be generated.

Note: Whenever we are compiling any java program for every class present in the program, a separate .class will be generated. PK.class will not be generated as we have not written PK.java.



We can compile with PK.java program but if you want to run then it will give you error with could not find or load PK class as .class of PK is not available.

- If we run then we will get A Class main as output because A.class file is present.
- If we run then we will get B Class main as output because B.class file is present
- If we run then we will get C Class main as output because C.class file is present

What about if we compile with D.java?

Compile time error will come because it does not contain public static main method.

What about if we compile with PK.java?

Error will come class definition not found or load & .class is not there how come asking to run PK.java.

NOTE: A java program can contain any number of classes but at most one class can be declared as public. If there is no public class we can use any name for java program. If there is public class then name of the public class and name of program must be matched.