Everfreen

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## ANONYMOUS CLASS

- Like Anonymous Objects which can't be reused we create Anonymous Class when we don't want to reuse that class.

### Important Points

1. Anonymous class can be defined and instantiated simultaneously.

2. Anonymous class doesn't have any name.

3. You can't have a constructor in ~~an~~ an Anonymous class.

4. Anonymous class must be having a parent, either an interface or a class.

5. Anonymous Class can't be instantiated more than once, that means you can't create more than one object of this class.

## How / Ways To Make Anonymous Class

✓ I Way.

Program:-

```
Class Outer
{
int x=10;
static int y=20;

My display()
{

return  new My()
        {
        public void show()
        {
        Sop(x);
        Sop(y);
        }};
}
```

Anonymous Class.

Reference of this whole class will be returned.

```
psvm
{
Outer o= new Outer();
My z = o.display();
z.show();
}
```

```
interface My
{
void show()
}
```

✓ Rules broken

(i) We don't use 'class' to make class.
(ii) We don't use 'implement' or 'extend' to make parent.

Que→ Will there be any separate .class file for Anonymous class? (Remember Anony. Class doesn't have name.)

Ans→ Yes, with name
Outer$1.class → For 1st Anony. class
Outer$2.class → For 2nd " "
$
⋮
& so on.

$$\text{Outer\$1.class} \xrightarrow{\text{On Decompiling}} \text{class Outer\$1 implements My}$$

```
{

}
```

- II Way.

✓ RULE
When we pass a reference of interface to a $f^n$, we create a object of a interface in class which implements that interface and pass the reference.

Program:-

```
class Outer
{
int x=10;
static int y=20;

void display(My Z)
{
Z.show()
}
}
```

↳ Reference Passed will we catched in Reference variable of 'Z' of interface My.

Now to run 'show()' $f^n$ of Temp Class.

```
psvm()
{
Outer O=new Outer();
O.display(new Temp());
}
}
```

Reference of Object of Temp class is passed here.

```
class Temp implements My
{
public void show()
{
Sop("show");
}
}
```

```
interface My
{
void show()
}
```

✓ But we are not using object of Temp. more the once, hence we can make class in display $f^n$ & also make object there.

Program:-

Finalised Program

Exactly as Above

```
psvm()
{Outer O= new Outer();
   O.display(new My()
             {p.v.show()
              {sop("show");
              }}
   }});
```

Anonymous Class

Exactly as Above.

~~Exactly As Above~~
No need. X X

## III Way

Program:-

```
class Outer                      psvm()
{                                {
int x=10;                        Outer
static int y=20;                 My z=new My()
                                  {
Anonymous Class <---------        public void show()
                                  {
                                  sop("show");
                                  }};

                                 z.show(); }}
                                 interface My
                                 {
                                   void show();
                                 }
```

V.V.Imp.

## IV Way.

We can make interfaces without any function. These are known as Marker Interfaces.

Program:-

```
class Outer                      psvm()          Anonymous Class
{ int x=10;                      { My z= new My(){ };
 static int y=20;                  }  Not object of interface but
                                  }   is a anonymous class.
 sop("Maker                      interface My{} //Maker interface
      Interface");               {
                                 }
```

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- Since we haven't declared any function in interface we don't have to override ~~any~~ any function in ~~trap~~ class that implementing the interface. So, the implementing class can also be left blank.