

Local variable Type Inference

Data_Type varName = Value;

Example:

```
int employeeId = 01;
```

```
String studentId = "s01";
```

```
Student s = new Student();
```

But from Java 10 onward **we do not need to declare datatype**, instead of that we can use “**var**” before variable name. And this feature is called Inference.

Syntax:

```
var varName = Value;
```

Example:

```
var employeeId = 01;
```

```
var studentId = "s01";
```


```
var s = new Student();
```

Local variable Type Inference

- We can also use Type inference inside loop also.

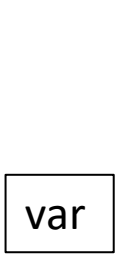
datatypes

```
for( int x=0; x<=5; x++ )  
{  
    System.out.println(x);  
}
```



var

```
for( var x=0; x<=5; x++ )  
{  
    System.out.println(x);  
}
```



Local variable Type Inference

- We can also declare arrays using **Type Inference**.

Syntax:

```
var variableName = new DataType[]{values};
```

```
int[] x = {10,20,30}; Old way
```

```
var x = new int[]{10,20,30}; new way
```


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Local variable Type Inference

- We can also declare collection variables using **Type Inference**.

```
List<String> list1 = new ArrayList<String>();
```

```
list1.add("xyz");
```

```
list1.add("pqr");
```

Old way

```
var list1 = new ArrayList<String>();
```

```
list1.add("xyz");
```

```
list1.add("pqr");
```

new way

optional

```
var list1 = new ArrayList<>();
```

Local variable Type Inference

- **Limitation Type Inference.**

- We can not use var to declare variable at class Level.

```
class Test  
{
```

```
    var x;
```

```
    static var y;
```

```
    public static void main(String[] args)  
    {
```

```
    }
```

```
}
```

Can not use "var" here



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Local variable Type Inference

- **Limitation Type Inference.**

➤ We can not use var as a **Parameter in methods** or **constructors**.

```
class Test
{
    public void m1( var x )
    {
    }
}
```

Wrong parameter declaration

```
class Test
{
    Test( var x )
    {
    }
}
```

Wrong parameter declaration

Local variable Type Inference

- **Limitation Type Inference.**

- We can not declare local variable without initialization and with null value.

```
class Test  
{
```

```
    public static void main(String[] args)  
    {
```

```
        var x;
```

```
        var name = null;
```

```
    }
```

```
}
```

Can not do like this