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TYPES OF VARIABLES



youtube: Zooming | <https://github.com/Soba-Arjun/>

Variable Types

- Each variable in Java has a specific type, which determines the size and layout of the variable's memory.
- the range of values that can be stored within that memory.
- Variable Declaration:

```
datatype variable = value ;
```

```
datatype variable = value , variable = value, ...;
```



Variable Types

- Example

```
int a, b, c; // Declares three int's, a, b, and c.
```

```
int a = 10, b = 10; // Example of initialization
```

```
byte B = 22; // initializes a byte type variable B.
```

```
double pi = 3.14159; // declares and assigns a value of PI.
```

```
char a = 'a'; // the char variable a is initialized with value 'a'
```



Variable Types

- Variable Types
 - Local Variable
 - Instance Variable
 - Class / Static Variable



Variable Type – Local Variable

- It declared inside of methods, constructors, or blocks.
- Access modifier cannot be used for local variable.
- Local variables are visible only within the methods.
- Variable can be accessed when the method is called.

```
Class
{
    method
    {
        declare variable
    }
}
```



Variable Type – Local Variable

```
public class Dog
{
    public void dogAge()
    {
        int age = 0;
        age = age + 7;
        System.out.println("Dog age is : " + age);
    }
    public static void main(String args[])
    {
        Dog dog = new Dog();
        dog.pupAge();
    }
}
```



Variable Type – Instance Variable

- It declare inside of a class but outside of methods.
- This variable can be access by any methods.
- By creating object for a class, we can access this variable from main methods.

```
Class
{
    declare variable
    method
    {
        //can use var
    }
}
```



Variable Type – Instance Variable

```
public class Dog {  
    int age;  
    public void Dog(int i) {  
        age = i;  
    }  
    public void display() {  
        System.out.println("Dog age is : " + age);  
    }  
    public static void main(String args[]) {  
        Dog dog = new Dog(30);  
        dog.display();  
    }  
}
```



Variable Type – Class / Static Variable

- Variable declared inside of class but outside of methods with static keyword.
- Static variables are stored in the static memory.
- Static variables can be accessed by static methods or constructors.

```
Class
{
    declare static variable
    constructor
    {
        //can use var
    }
    static method
    {
        //can use var
    }
}
```



Variable Type – Class / Static Variable

```
public class Dog {  
    static int age;  
    public void Dog(int i) {  
        age = i;  
        System.out.println(age); //30  
    }  
    public static void main(String args[]) {  
        Dog dog = new Dog(30);  
        dog.display();  
        age= 40;  
        System.out.println(age); //40  
    }  
}
```

