STATIC

- **Static is a keyword.**
- **It is a modifier.**
- **Any member of a class is prefixed with a static modifier then it is known as a static member of a class**
- **Static members are also known as class members.**

NOTE :

Static members can be prefixed only for a class members (members declared in a class).

STATIC MEMBERS:

- **Static method**
- **Static variable**
- **Static initializers**

STATIC METHOD :

A method prefixed with a static modifier is known as the static method.

CHARACTERISTICS :

- **Static method block is stored in the method area and reference of the static method is stored inside the class static area (static pool).**
- **We can use the static method with or without creating an object of the class.**
- **We can use the static method with the help of the class name.**

● **A static method of the class can be used in any class with the help of a class name.**

STATIC VARIABLE:

Variable declared in a class block and prefixed with static modifier is known as static variable.

CHARACTERISTICS :

● **It is a member of the class.**

● **It will be assigned a default value.**

● **Memory will be allocated inside the class static area.**

● **It is global in nature, it can be used within the class as well as in different classes.**

● **We can use a static variable with the help of the class name as well as with the help of object reference.**

● **We can access the static variable from different classes directly with the help of the class name.**

NOTE: If static variable and local variable are of the same name then we can differentiate static variable with the help of class name.

STATIC INITIALIZERS :

We have two types of static initializers. They are,

1. **Single line static initializer**
2. **Multi-line static initializer**

SINGLE LINE STATIC INITIALIZER:

Syntax to create single line static initializers :

static data type variable = value / expression ;

MULTILINE STATIC INITIALIZER:

Syntax to create multi line static initializers :

```
static
{
    Statements ;
}
```

CHARACTERISTICS:

- **Static initializers get executed implicitly during the loading process of the class.**
- **A class can have more than one static initializer they execute top to bottom order.**

PURPOSE OF STATIC INITIALIZER:

- **Static initializers are used to execute the startup instructions.**
- **As the static blocks get executed before the actual execution of the main method.**

STATIC CONTEXT :

- **The block which belongs to the static method and multi-line static initializer is known as static context.**
- **Inside a static context, we can use the static members of the same class directly by using its name.**
- **Inside a static context, we can't use the non-static members of the same or different class directly by using its name or by using its class name.**
- **this keyword is not allowed inside the static context.**