**About <generator>Tag:**

* This is an optional element comes under<id>tag of the mapping file
* The <generator>tag specifies the class name to be used by hibernate to generate the primary key for new record while inserting the record into DB i.e. the generator informs to the hibernate that, how the primary key value for the new record should be generated
* Hibernate uses different primary key generator algorithms, based on the class we define in the <generator> element & implementation of these algorithms are present in the Hibernate API.
* “org.hibernate.id” is the package in which hibernate Generator classes are present
* Hibernate provides different primary key generator classes and all these classes implements org.hibernate.id.IdentifierGeneratar Interface
* Hibernate offers various generation strategies some of them are

1. assigned
2. increment
3. identity
4. Many More (native, hilo, uuid,etc.,)

**1. assigned**

* This is the default generator class used by the hibernate
* If generator class is assigned, then the programmer is responsible for providing the primary key information

<id name=*"regno"* column=*"regno"*>

<generator class=*"assigned"*/>

</id>

**2. increment**

* If generator class is increment, then the **Hibernate** is responsible for assigning the primary key value **of type long, short or integer only**
* This generator uses the formula “ (Max of PK value in DB) + 1” for generating the PK Value
* if we manually assigned the value for primary key for an object, then hibernate doesn’t considers that value

<id name=*"regno"* type=*"java.lang.Integer"* column=*"regno"*>

<generator class=*"increment"*/>

</id>

**3. identity**

* If generator class is identity, then the **DB** is responsible for assigning the primary key value **of type long, short or integer only**
* Compared to identity, increment is slower in operation, because hibernate is responsible for generating the PK value by selecting max of PK Value before inserting new record.

<id name=*"regno"* column=*"regno"*>

<generator class=*"identity"*/>

</id>