**Primary key Generators**

**In Annotation**

1. AUTO
2. SEQUENCE
3. IDENTITY
4. TABLE

//**XML generator are used to generate primary key**

/\*

\* assigned

\* increment

\* sequence

\* hilo

\* identity

\* native

\* foreign

\* uuid

\*

\* in xml we have <generator> tag is used to configure PK generator

\*

\* **assigned**- it id default generator , if u don't configure any generator ,

\* then by default hibernate will consider it has to assigned by the programmer

Example:

<id name=*"empId"* column=*"emp\_Id"*>

<generator class=*"assigned"*></generator><!-- assigned means programmer will be assigning the primary key value not the db/hibernate-->

</id>

\*

\*

\*/

2> **increment** -it is a short name for **IncrementGenerator** class – read the max value form the db and then increment it by one and the return the value to hibernate.

**NOTE:**(autogenerated value will be provided by the only MYSQL db)In Oracle as it use sequence that why increment will not work with Oracle DB as it does not support autogenerated feature.

3> sequence – it is a shortcut to SequenceGenerator class, it read the next value of a DB sequence and then return that value to HB. oracle sequence it eligible to provide unique id.

4> **hil0** -it is a short name for **TableHiLoGenerator** class.

<!-- <generator class="hilo">

<param name="table">mytable</param>

<param name="column">col1</param>

<param name="max\_lo">10</param>

</generator> -->

<!-- table - hibernate\_unique\_key

column :next\_hi

max\_lo:32767

formula used for hilo generator

max\_lo \* next\_hi +next\_hi

By taking the guven parameter ,hilo will create a table, with one

column and calculate the column value ased on the hilo fomula

-->

4> **indentity** -it is a short name for **IndentityGenerator** class.

It is Db dependent generator it will work with Mysql not with Oracle.

It read an auto\_increment column of db and takes that value and return to HB.

5> **native** -it is a short name for **NativeGenerator** class.(DB Independent

It will check for DB, and check is that DB supports identity generator or not, if support ,then it acts as identity.

And it DB does not supports for identity, it will check for sequence generator.

And it DB does not supports for sequence, it will check for hilo generator.

<id name=*"empId"* column=*"emp\_Id"*>

<generator class=*"native"*>

</generator>

6> **foreign** -it is a short name for **ForeignGenerator** class. It is only applicable for one-one relationship.

It will return id of parent object as if for child object.

<id name=*"empId"* column=*"emp\_Id"*>

<generator class=*"foreign"*>

</generator>

6> **uuid generator- (Universal Unique Identifier)**

it is a short name for **AbstractUUIDGenerator** class.

It generates a string of 32 characters length based different values

1. IP address of the machine
2. Start up of JVM
3. System time
4. Counter value in JVM

Based on any of the above 4 value uuid generator will generate an unique id and return to HB.

<id name=*"empId"* column=*"emp\_Id"*>

<generator class=*"uuid"*>

</generator>

**Note : except assigned generator ,all other work with only number type of PK.**