**OOPS**

Find the min and max simultaneously -> but how to return multiple value i.e both max and min

Then How to do?

Yes, we can use A box that can hold both values i.e object of a class that can hold both integer

Class Pair{

Int min;

Int max;

Public Pair(int a,int b){

Min=a;

Max=b;

}

}

What if we need to a class of double and string

**package** lecture16;

**public** **class** PairString {

String min;

String max;

**public** PairString(){

}

**public** PairString(String min,String max){

**this**.min=min;

**this**.max=max;

}

}

**package** lecture16;

**public** **class** PairDouble {

**double** min;

**double** max;

**public** PairDouble(){

}

**public** PairDouble(**double** min,**double** max){

**this**.min=min;

**this**.max=max;

}

}

/\*for each data type need to make different classes always therefore we need a different concepts

That can make our class smart enough to make itself flexible to each datatype

Therefore we will use Generic Classes

=>> Generic Classes => it make loose coupling between class and its data member

How to make your own generic class

\*/

Generic Programming

**package** lecture16;

**public** **class** Test {

**public** **static** PairGeneric<Integer> getMinMax(**int** arr[])

{

**int** min=Integer.***MAX\_VALUE***;

**int** max=Integer.***MIN\_VALUE***;

**for**(**int** i=0;i<arr.length;i++)

{

**if**(arr[i]>max)

max=arr[i];

**if**(arr[i]<min)

min=arr[i];

}

//Pair p = new Pair(min,max);

PairGeneric<Integer> p = **new** PairGeneric<Integer>(min,max);

**return** p;

}

**public** **static** **void** main(String args[])

{

**int** arr[]={2,7,8,1,14};

PairGeneric<Integer> p = *getMinMax*(arr);

System.***out***.println(p.max);

System.***out***.println(p.min);

}

}

**package** lecture16;

**public** **class** PairGeneric<T>{

T min;

T max;

**public** PairGeneric(){

}

**public** PairGeneric(T min,T max){

**this**.min=min;

**this**.max=max;

}

}

Now what if you want pair of Integer and String values =>

**public** **class** PairGeneric<T,S>{

T min;

S max;

**public** PairGeneric(){

}

**public** PairGeneric(T min,S max){

**this**.min=min;

**this**.max=max;

}

}