**import** java.awt.List;

**import** java.io.File;

**import** java.io.FileNotFoundException;

**import** java.io.FileReader;

**import** java.io.IOException;

**import** java.util.ArrayList;

**class** key\_value

{

**int** key;

String value;

String key1;

ArrayList list=**null**;

**int** value3;

String key3;

key\_value(**int** key,String Val)

{

**this**.key=key;

**this**.value=Val;

}

key\_value(String key,ArrayList data)

{

key1=key;

list=data;

}

key\_value(String key, **int** value)

{

key3=key;

value3=value;

}

}

**public** **class** Mapper

{

**public** **static** ArrayList<Integer> count\_occurance(key\_value[] k,String data)

{

**int** counter=0;

ArrayList list=**new** ArrayList<Integer>(counter);

**for**(key\_value temp:k)

{

**if**(temp==**null**)

**break**;

**else** **if**(temp.value.equals(data))

{

counter++;

}

**while**(counter!=0)

{

list.add(1);

counter--;

}

//System.out.println(list);

}

**return** list;

}

**public** **static** **boolean** check(key\_value[] k1,String data)

{

**boolean** k=**true**;

**for**(key\_value temp2:k1)

{

**if**(temp2==**null**)

**break**;

**else** **if**(temp2.key1.equals(data))

{

k=**false**;

**break**;

}

}

**return** k;

}

**public** **static** key\_value[] map\_wc(File file) **throws** Exception

{String a="";

String temp[]=**null**;

String f;

**int** counter=0;

key\_value k[]=**new** key\_value[100];

key\_value k\_compressing[]=**new** key\_value[40];

FileReader fr=**new** FileReader(file);

**int** ch;

**while** ((ch=fr.read())!=-1)

{

a= a+(**char**)ch;

}

a=a.replaceAll("\r\n", " ");// Ye Single line main lane ke liye

//System.out.println(a);

temp=a.split(" ");

counter=-1;

**for**(String k1:temp)

{

counter++;

k[counter]=**new** key\_value(1,k1);

}

counter=-1;

**for**(key\_value k\_temp:k)

{

**if**(k\_temp==**null**)

**break**;

**for**(key\_value k\_temp1:k\_compressing)

{

**if**(*check*(k\_compressing,k\_temp.value))

{

counter++;

//System.out.println(k\_temp.value+" "+count\_occurance( k,k\_temp.value));

k\_compressing[counter]=**new** key\_value(k\_temp.value, *count\_occurance*( k,k\_temp.value));

**break**;

}

}

}

System.***out***.println("Output of Mapper\n-----------------------\n");

**for**(key\_value temp5:k\_compressing)

{

**if**(temp5==**null**)

**break**;

System.***out***.println(temp5.key1+"\t"+temp5.list);

}

**return** k\_compressing;

}

}

**class** Reducer

{

**public** **static** key\_value[] reduce\_wc(key\_value k[])

{

key\_value k3[]=**new** key\_value[k.length];

**int** counter=0;

**for**(key\_value temp:k)

{

**if**(temp==**null**)

**break**;

k3[counter]=**new** key\_value(temp.key1,temp.list.size());

counter++;

}

System.***out***.println("\n\nOutput of Reducer\n-----------------------\n");

**for**(key\_value temp5:k3)

{

**if**(temp5==**null**)

**break**;

System.***out***.println(temp5.key3+"\t"+temp5.value3);

}

**return** k3;

}

}

**class** runing

{

**public** **static** **void** main(String[]a) **throws** Exception

{

File f= **new** File("D:\\1.txt");

Reducer.*reduce\_wc*(Mapper.*map\_wc*(f));

}

}