Java基础练习3

1. 建立一个实体类Student类，属性：姓名，年龄，成绩，班级

建立一个list1，包含 “张三，18岁，80分，1班”，“李四，19岁，100分，1班”，“王五，17岁，59分，1班”。

建立一个list2，包含 “赵六，18岁，85分，2班”，“刘七，19岁，93分，2班”，“孙八，17岁，55分，2班”。

1. 整合两个list学生信息成一个新的list
2. 按照分数给出学生信息排名
3. 输出不及格的学生信息
4. 查找张三的信息
5. 从list剔除年龄大于18岁的学生信息
6. 使用Map 完成练习1的习题。

3.仿照手机淘宝，设计订单和商品的实体类。

学生类代码

**package** sec3;  
  
**import** java.util.Comparator;  
  
**public class** Student **implements** Comparable{  
 **private** String **name**;  
 **private int age**;  
 **private int score**;  
 **private** String **grade**;  
  
 **public** Student(String name, **int** age, **int** score, String grade) {  
 **this**.**name** = name;  
 **this**.**age** = age;  
 **this**.**score** = score;  
 **this**.**grade** = grade;  
 }  
  
 **public** String getName() {  
 **return name**;  
 }  
  
 **public void** setName(String name) {  
 **this**.**name** = name;  
 }  
  
 **public int** getAge() {  
 **return age**;  
 }  
  
 **public void** setAge(**int** age) {  
 **this**.**age** = age;  
 }  
  
 **public int** getScore() {  
 **return score**;  
 }  
  
 **public void** setScore(**int** score) {  
 **this**.**score** = score;  
 }  
  
 **public** String getGrade() {  
 **return grade**;  
 }  
  
 **public void** setGrade(String grade) {  
 **this**.**grade** = grade;  
 }  
  
 @Override  
 **public** String toString() {  
 **return name** + **" "** + **age** + **"\t"** + **score** + **"\t"** + **grade**;  
 }  
  
 @Override  
 **public int** compareTo(Object o) {  
 Student s =(Student)o;  
 **return** Double.*compare*(**this**.**score**,s.**score**);  
 }  
}

1.**package** sec3;  
  
  
**import** java.util.ArrayList;  
**import** java.util.List;  
  
**public class** TestStudent {  
 **public static void** main(String[] args) {  
 List<Student> list = **new** ArrayList<>();  
 list.add(**new** Student(**"张三"**,18,80,**"1班"**));  
 list.add(**new** Student(**"李四"**,19,100,**"1班"**));  
 list.add(**new** Student(**"王五"**,17,59,**"1班"**));  
 List<Student> list2 = **new** ArrayList<>();  
 list2.add(**new** Student(**"赵六"**,18,85,**"2班"**));  
 list2.add(**new** Student(**"刘七"**,19,93,**"2班"**));  
 list2.add(**new** Student(**"孙八"**,17,55,**"2班"**));  
 List<Student> list3 = **new** ArrayList<>();  
 list3.addAll(list);  
 list3.addAll(list2);  
 System.***out***.println(**"整合两个list学生信息成一个新的list:"**);  
 **for** (Student s : list3) {  
 System.***out***.println(s);  
 }  
 System.***out***.println(**"按照分数给出学生信息排名:"**);  
 **for** (**int** i = 0; i <list3.size()-1 ; i++) {  
 **for** (**int** j = 0; j < list3.size()-1-i; j++) {  
 Student s1 = list3.get(j);  
 Student s2 = list3.get(j+1);  
 **if** (s1.getScore()<s2.getScore()){  
 list3.set(j,s2);  
 list3.set(j+1,s1);  
 }  
 }  
 }  
 **for** (Student s : list3) {  
 System.***out***.println(s);  
 }  
 System.***out***.println(**"输出不及格的学生信息:"**);  
 **for** (Student s : list3) {  
 **if** (s.getScore()<60){  
 System.***out***.println(s);  
 }  
 }  
 System.***out***.println(**"查找张三的信息:"**);  
 **for** (Student s : list3) {  
 **if**(**"张三"**.equals(s.getName())){  
 System.***out***.println(s);  
 }  
 }  
 System.***out***.println(**"从list剔除年龄大于18岁的学生信息:"**);  
 List<Student> list4 = **new** ArrayList<>();  
 **for** (Student s : list3) {  
 **if** (s.getAge()>18){  
 list4.add(s);  
 }  
 }  
 list3.removeAll(list4);  
 **for** (Student s : list3) {  
 System.***out***.println(s);  
 }  
 }  
}

整合两个list学生信息成一个新的list:

张三 18 80 1班

李四 19 100 1班

王五 17 59 1班

赵六 18 85 2班

刘七 19 93 2班

孙八 17 55 2班

按照分数给出学生信息排名:

李四 19 100 1班

刘七 19 93 2班

赵六 18 85 2班

张三 18 80 1班

王五 17 59 1班

孙八 17 55 2班

输出不及格的学生信息:

王五 17 59 1班

孙八 17 55 2班

查找张三的信息:

张三 18 80 1班

从list剔除年龄大于18岁的学生信息:

赵六 18 85 2班

张三 18 80 1班

王五 17 59 1班

孙八 17 55 2班

2.**package** sec3;  
  
**import** java.util.\*;  
  
**public class** TestStudent2 {  
 **public static void** main(String[] args) {  
 Map<Integer, Student> map = **new** HashMap<>();  
 map.put(1, **new** Student(**"张三"**, 18, 80, **"1班"**));  
 map.put(2, **new** Student(**"李四"**, 19, 100, **"1班"**));  
 map.put(3, **new** Student(**"王五"**, 17, 59, **"1班"**));  
 Map<Integer, Student> map2 = **new** HashMap<>();  
 map.put(4, **new** Student(**"赵六"**, 18, 85, **"2班"**));  
 map.put(5, **new** Student(**"刘七"**, 19, 93, **"2班"**));  
 map.put(6, **new** Student(**"孙八"**, 17, 55, **"2班"**));  
 Map<Integer, Student> map3 = **new** HashMap<>();  
 map3.putAll(map);  
 map3.putAll(map2);  
 System.***out***.println(**"整合两个map学生信息成一个新的map:"**);  
 **for** (Integer key : map3.keySet()) {  
 System.***out***.println(key + **":"** +map3.get(key));  
 }  
 List<Map.Entry<Integer, Student>> list = **new** ArrayList<Map.Entry<Integer, Student>>(map3.entrySet());  
 Collections.*sort*(list,**new** Comparator<Map.Entry<Integer, Student>>() {  
 @Override  
 **public int** compare(Map.Entry<Integer, Student> o1, Map.Entry<Integer, Student> o2) {  
 **return** o2.getValue().compareTo(o1.getValue());  
 }  
 });  
 System.***out***.println(**"按照分数给出学生信息排名:"**);  
 **for**(Map.Entry<Integer, Student> mapping:list){  
 System.***out***.println(mapping.getKey()+**":"**+mapping.getValue());  
 }  
 System.***out***.println(**"输出不及格的学生信息:"**);  
 **for** (Integer key : map3.keySet()) {  
 **if** (map3.get(key).getScore()<60){  
 System.***out***.println(key + **":"** +map3.get(key));  
 }  
 }  
 System.***out***.println(**"查找张三的信息"**);  
 **for** (Integer key : map3.keySet()) {  
 **if** (**"张三"**.equals(map3.get(key).getName())){  
 System.***out***.println(key + **":"** +map3.get(key));  
 }  
  
 }  
 System.***out***.println(**"从map剔除年龄大于18岁的学生信息:"**);  
 Iterator<Map.Entry<Integer, Student>> it = map3.entrySet().iterator();  
 **while**(it.hasNext()){  
 Map.Entry<Integer, Student> entry = it.next();  
 Integer key = entry.getKey();  
 Student value = entry.getValue();  
 **if**(value.getAge()>18){  
 it.remove();  
 }  
 }  
  
 **for** (Integer key : map3.keySet()) {  
 System.***out***.println(key + **":"** +map3.get(key));  
 }  
 }  
}

整合两个map学生信息成一个新的map:

1:张三 18 80 1班

2:李四 19 100 1班

3:王五 17 59 1班

4:赵六 18 85 2班

5:刘七 19 93 2班

6:孙八 17 55 2班

按照分数给出学生信息排名:

2:李四 19 100 1班

5:刘七 19 93 2班

4:赵六 18 85 2班

1:张三 18 80 1班

3:王五 17 59 1班

6:孙八 17 55 2班

输出不及格的学生信息:

3:王五 17 59 1班

6:孙八 17 55 2班

查找张三的信息

1:张三 18 80 1班

从map剔除年龄大于18岁的学生信息:

1:张三 18 80 1班

3:王五 17 59 1班

4:赵六 18 85 2班

6:孙八 17 55 2班

订单实体类

**package** sec3;  
  
*/\*\*  
 \* 订单实体类  
 \* huangzewei  
 \* 2020.3.4  
 \*/***public class** Order {  
 */\*\*  
 \* 订单编号  
 \*/* **private** String **orderNum**;  
 */\*\*  
 \* 订单总价格  
 \*/* **private** String **orderPrice**;  
 */\*\*  
 \* 用户id  
 \*/* **private int userId**;  
 */\*\*  
 \* 订单创建时间  
 \*/* **private** String **createTime**;  
 */\*\*  
 \*商品数量  
 \*/* **private int goodsNum**;  
 */\*\*  
 \* 商品类型  
 \*/* **private** String **categorize**;  
 */\*\*  
 \* 订单发货日期  
 \** ***@return*** *\*/* **private** String **Time**;  
  
 **public** Order(String orderNum, String orderPrice, **int** userId, String createTime, **int** goodsNum, String categorize, String time) {  
 **this**.**orderNum** = orderNum;  
 **this**.**orderPrice** = orderPrice;  
 **this**.**userId** = userId;  
 **this**.**createTime** = createTime;  
 **this**.**goodsNum** = goodsNum;  
 **this**.**categorize** = categorize;  
 **Time** = time;  
 }  
  
 **public** Order() {  
 }  
  
 **public** String getOrderNum() {  
 **return orderNum**;  
 }  
  
 **public void** setOrderNum(String orderNum) {  
 **this**.**orderNum** = orderNum;  
 }  
  
 **public** String getOrderPrice() {  
 **return orderPrice**;  
 }  
  
 **public void** setOrderPrice(String orderPrice) {  
 **this**.**orderPrice** = orderPrice;  
 }  
  
 **public int** getUserId() {  
 **return userId**;  
 }  
  
 **public void** setUserId(**int** userId) {  
 **this**.**userId** = userId;  
 }  
  
 **public** String getCreateTime() {  
 **return createTime**;  
 }  
  
 **public void** setCreateTime(String createTime) {  
 **this**.**createTime** = createTime;  
 }  
  
 **public int** getGoodsNum() {  
 **return goodsNum**;  
 }  
  
 **public void** setGoodsNum(**int** goodsNum) {  
 **this**.**goodsNum** = goodsNum;  
 }  
  
 **public** String getCategorize() {  
 **return categorize**;  
 }  
  
 **public void** setCategorize(String categorize) {  
 **this**.**categorize** = categorize;  
 }  
  
 **public** String getTime() {  
 **return Time**;  
 }  
  
 **public void** setTime(String time) {  
 **Time** = time;  
 }  
}

商品实体类

**package** sec3;  
*/\*\*  
 \* 商品实体类  
 \* huangzewei  
 \* 2020.3.4  
 \*/***public class** Goods {  
 */\*\*  
 \* 商品编号  
 \*/* **private** String **goodNum**;  
 */\*\*  
 \* 商品价格  
 \*/* **private** String **goodPrice**;  
 */\*\*  
 \* 商品类型  
 \*/* **private** String **goodSType**;  
 */\*\*  
 \* 创建时间  
 \*/* **private** String **goodsCreateTime**;  
 */\*\*  
 \* 商品库存  
 \*/* **private int goodsCount**;  
 */\*\*  
 \* 商品评价  
 \*/* **private** String **goodsEvaluate**;  
 */\*\*  
 \* 商品购买数量  
 \*/* **private int goodsPurchaseCount**;  
 */\*\*  
 \* 商品卖家信息  
 \*/* **private** String **saleMessage**;  
  
 **public** Goods(String goodNum, String goodPrice, String goodSType, String goodsCreateTime, **int** goodsCount, String goodsEvaluate, **int** goodsPurchaseCount, String saleMessage) {  
 **this**.**goodNum** = goodNum;  
 **this**.**goodPrice** = goodPrice;  
 **this**.**goodSType** = goodSType;  
 **this**.**goodsCreateTime** = goodsCreateTime;  
 **this**.**goodsCount** = goodsCount;  
 **this**.**goodsEvaluate** = goodsEvaluate;  
 **this**.**goodsPurchaseCount** = goodsPurchaseCount;  
 **this**.**saleMessage** = saleMessage;  
 }  
  
 **public** Goods() {  
 }  
  
 **public** String getGoodNum() {  
 **return goodNum**;  
 }  
  
 **public void** setGoodNum(String goodNum) {  
 **this**.**goodNum** = goodNum;  
 }  
  
 **public** String getGoodPrice() {  
 **return goodPrice**;  
 }  
  
 **public void** setGoodPrice(String goodPrice) {  
 **this**.**goodPrice** = goodPrice;  
 }  
  
 **public** String getGoodSType() {  
 **return goodSType**;  
 }  
  
 **public void** setGoodSType(String goodSType) {  
 **this**.**goodSType** = goodSType;  
 }  
  
 **public** String getGoodsCreateTime() {  
 **return goodsCreateTime**;  
 }  
  
 **public void** setGoodsCreateTime(String goodsCreateTime) {  
 **this**.**goodsCreateTime** = goodsCreateTime;  
 }  
  
 **public int** getGoodsCount() {  
 **return goodsCount**;  
 }  
  
 **public void** setGoodsCount(**int** goodsCount) {  
 **this**.**goodsCount** = goodsCount;  
 }  
  
 **public** String getGoodsEvaluate() {  
 **return goodsEvaluate**;  
 }  
  
 **public void** setGoodsEvaluate(String goodsEvaluate) {  
 **this**.**goodsEvaluate** = goodsEvaluate;  
 }  
  
 **public int** getGoodsPurchaseCount() {  
 **return goodsPurchaseCount**;  
 }  
  
 **public void** setGoodsPurchaseCount(**int** goodsPurchaseCount) {  
 **this**.**goodsPurchaseCount** = goodsPurchaseCount;  
 }  
  
 **public** String getSaleMessage() {  
 **return saleMessage**;  
 }  
  
 **public void** setSaleMessage(String saleMessage) {  
 **this**.**saleMessage** = saleMessage;  
 }  
}