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| 2017년 11월 7일 Java 실습보고서 |
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| 실습 1) 단어장 만들기(HashMap) |

**■ 소스코드**

**[questionManager.java]**

**package** Dictionary;

**import** java.util.\*;

**public** **class** questionManager {//게임실행

**private** Scanner scan=**new** Scanner(System.***in***);

**private** Random r=**new** Random();

**private** **int** point=0;

**private** **final** **int** SCORE=10;

**private** **int** tot=0;

**public** questionManager(){

}

**public** **void** start(ArrayList<Words>a) { // 주관식

System.***out***.println("단어 퀴즈(주관식)");

**for**(**int** i=0;i<a.size();i++) {

**int** r1=r.nextInt(a.size());

**if**(!a.get(r1).isUsed()) {

a.get(r1).using();

System.***out***.print(a.get(r1).getWord()+": ");

String temp=scan.nextLine();

**if**(a.get(r1).getMeaning().contains("/")) {

String s[]=a.get(r1).getMeaning().split("/");

**for**(**int** j=0;j<s.length;j++) {

**if**(s[j].equals(temp)) {

point++;

System.***out***.println("정답입니다.");

System.***out***.println(SCORE+"점 누적");

**break**;

}**else** **if**(j==(s.length-1))

System.***out***.println("오답입니다.");

}

}**else** **if**(temp.equals(a.get(r1).getMeaning())) {

point++;

System.***out***.println("정답입니다.");

System.***out***.println(SCORE+"점 누적");

}**else**

System.***out***.println("오답입니다.");

}**else**

i--;

}

System.***out***.println(point+"개의 정답");

System.***out***.println("총 점수 : "+SCORE\*point);

tot+=SCORE\*point;

**for**(**int** i=0;i<10;i++)

a.get(i).reset();

point=0;

}

**public** **void** start2(ArrayList<Words>a) { // 객관식

System.***out***.println("단어 퀴즈(객관식)");

**for**(**int** i=0;i<a.size();i++) {

**int** r1=r.nextInt(a.size());

**if**(!a.get(r1).isUsed()) {

a.get(r1).using();

System.***out***.println((i+1)+". "+a.get(r1).getWord()+"의 뜻은?" );

String temp[]=**new** String[4];

**int** num=r.nextInt(4);

temp[num]=a.get(r1).getMeaning();

**for**(**int** k=0;k<4;k++) {

**if**(k!=num) {

temp[k]=a.get(r.nextInt(a.size())).getMeaning();

**if**(temp[k].equals(temp[num]))

k--;

**else** {

**for**(**int** j=0;j<k;j++) {

**if**(temp[j].equals(temp[k]) && j!=num) {

temp[j]=a.get(r.nextInt(a.size())).getMeaning();

j--;

}

}

}

}**else**

**continue**;

}//객관식 보기만 랜덤으로

**for**(**int** j=0;j<4;j++) {

System.***out***.print((j+1)+") "+temp[j]+" ");

}

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

System.***out***.print("정답 :");

**int** ch=scan.nextInt();

**if**(ch==(num+1)) {

System.***out***.println("정답입니다.");

System.***out***.println(SCORE+"점 누적");

point++;

}

**else**

System.***out***.println("오답입니다.");

}**else**

i--;

}

System.***out***.println(point+"개의 정답");

System.***out***.println("총 점수 : "+SCORE\*point);

tot+=SCORE\*point;

**for**(**int** i=0;i<a.size();i++)

a.get(i).reset();

point=0;

}

**public** **void** show(ArrayList<Words>a) {

System.***out***.println("[단어장]");

**for**(**int** i=0;i<a.size();i++)

System.***out***.println(a.get(i).getWord()+" : "+a.get(i).getMeaning());

}

**public** **void** start3(ArrayList<Words>a) {

HashMap<String, String> dic = **new** HashMap<String, String>();

**for**(**int** i=0;i<a.size();i++)

dic.put(a.get(i).getWord(),a.get(i).getMeaning());

System.***out***.print("찾고 싶은 단어검색(영어):");

String eng = scan.nextLine();

String kor = dic.get(eng);

**if**(kor == **null**)

System.***out***.println(eng +"는 없는 단어 입니다.");

**else**

System.***out***.println(eng+" : "+kor);

}

**public** **void** start4(ArrayList<Words>a) {

HashMap<String, String> dic = **new** HashMap<String, String>();

**for**(**int** i=0;i<a.size();i++)

dic.put(a.get(i).getWord(),a.get(i).getMeaning());

System.***out***.print("찾고 싶은 단어검색(한글):");

String tempKor=scan.nextLine();

**for**(**int** i=0;i<a.size();i++) {

String[] kor=a.get(i).getMeaning().split("/");

**for**(**int** j=0;j<kor.length;j++) {

**if**(kor[j].equals(tempKor)) {

String eng=a.get(i).getWord();

String kor2=dic.get(eng);

System.***out***.println(eng+" : "+kor2);

**return** ;

}

}

}

System.***out***.println(tempKor +"를 뜻으로 갖는 단어는 없습니다.");

}

**public** String toString(){

**return** "지금까지 획득한 총 점수 : "+tot+"\n";

}

}

**[quiz.java]**

**package Dictionary;**

**import java.io.File;**

**import java.io.FileNotFoundException;**

**import java.util.ArrayList;**

**import java.util.Scanner;**

**public class quiz {**

**public static void main(String args[]) throws FileNotFoundException {**

**File file =new File("test.txt");**

**Scanner scan;**

**int count=0;**

**ArrayList <Words>a=new ArrayList<Words>(10);**

**questionManager q=new questionManager();**

**scan=new Scanner(file);**

**while(scan.hasNextLine()) {**

**String str=scan.nextLine();**

**a.add(new Words(str));**

**count++;**

**}**

**scan.close();**

**while(true) {**

**Scanner sc=new Scanner(System.in);**

**System.out.println("1)주관식 2)객관식 3)단어장 4)영한사전 5)한영사전 6)점수출력 7)종료");**

**System.out.print("메뉴 선택: ");**

**int menu=sc.nextInt();**

**switch(menu) {**

**case 1:**

**q.start(a);**

**break;**

**case 2:**

**q.start2(a);**

**break;**

**case 3:**

**q.show(a);**

**break;**

**case 4:**

**q.start3(a);**

**break;**

**case 5:**

**q.start4(a);**

**break;**

**case 6:**

**System.out.println(q);**

**break;**

**case 7:**

**System.out.println("프로그램을 종료합니다.");**

**return;**

**default:{**

**System.out.println("메뉴를 잘못입력하였습니다.");**

**break;**

**}**

**}**

**}**

**}**

**}**

**[Words.java]**

**package** Dictionary;

**public** **class** Words {

String word,meaning;

**boolean** used=**false**;

**public** Words(String str) {

String[]temp=str.split(":");

**this**.word=temp[0].trim();

**this**.meaning=temp[1].trim();

}

**public** String getWord() {

**return** word;

}

**public** String getMeaning() {

**return** meaning;

}

**public** **void** using() {

used=!used;

}

**public** **boolean** isUsed() {

**return** used;

}

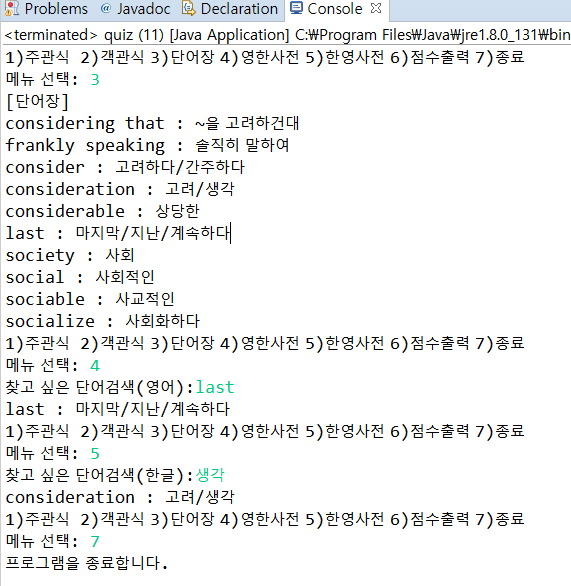
**public** **void** reset() {

used=**false**;

}

}

**■ 결과화면**

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