**package** main;

**public** **class** Pstart {

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

Wordpad w = **new** Wordpad();

w.menu();

}

}**package** main;

**import** java.util.Scanner;

**public** **class** TrainInfo {

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

**int** trainNum = 0;

String trainClass = **null**;

**int** trainArr = 0;

**int** trainLate = 0;

}

**package** main;

**import** java.util.Scanner;

**public** **class** TrainEdit {

TrainInfo[] train = **new** TrainInfo[4];

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

**public** **void** menu() {

saveTrain(0, 1111, "무궁화", 0, 0);

saveTrain(1, 2222, "새마을", 0, 0);

saveTrain(2, 3333, "무궁화", 0, 0);

saveTrain(3, 4444, "새마을", 0, 0);

**while** (**true**) {

System.***out***.println("기차 정보 입력 : 1");

System.***out***.println("기차 정보 수정 : 2");

System.***out***.println("기차 정보 검색 : 3");

System.***out***.println("기차 정보 삭제 : 4");

System.***out***.println("전광판 출력 : 5");

**int** userInt = in.nextInt();

**if** (userInt == 1) {

insert();

} **else** **if** (userInt == 2) {

mod();

} **else** **if** (userInt == 3) {

search();

} **else** **if** (userInt == 4) {

delete();

} **else** **if** (userInt == 5) {

searchBoard();

} **else** {

**break**;

}

}

}

**private** **void** saveTrain(**int** i, **int** num, String cls, **int** arr, **int** late) {

TrainInfo t = **new** TrainInfo();

train[i] = t;

t.trainNum = num;

t.trainClass = cls;

t.trainArr = arr;

t.trainLate = late;

}

**private** **void** insert() {

TrainList();

System.***out***.println("기차번호를 입력해주세요");

**int** userNum = in.nextInt();

in.nextLine();

System.***out***.println("도착 시간을 입력하세요");

**int** userArr = in.nextInt();

in.nextLine();

System.***out***.println("실제 도착 시간을 입력하세요");

**int** userLate = in.nextInt();

in.nextLine();

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

**if** (train[i].trainNum == userNum) {

System.***out***.println("작동on");

saveTrain(i, train[i].trainNum, train[i].trainClass, userArr, userLate);

}

}

}

**private** **void** mod() {

TrainList();

System.***out***.println("기차번호를 입력해주세요");

**int** userNum = in.nextInt();

in.nextLine();

System.***out***.println("지연 시간을 입력하세요");

**int** userLate = in.nextInt();

in.nextLine();

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

**if** (train[i].trainNum == userNum) {

System.***out***.println("작동on");

saveTrain(i, train[i].trainNum, train[i].trainClass, train[i].trainArr, userLate);

}

}

System.***out***.println("수정 완료");

}

**private** **void** search() {

searchBoard();

System.***out***.println("출발시간을 입력해주세요");

**int** userNum = in.nextInt();

in.nextLine();

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

**if** (train[i].trainArr >= userNum) {

System.***out***.println("기차번호 :" + train[i].trainNum);

System.***out***.println("기차종류 :" + train[i].trainClass);

System.***out***.println("도착시간 :" + train[i].trainArr);

System.***out***.println("지연시간 :" + train[i].trainLate);

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

}

}

}

**private** **void** delete() {

TrainList();

System.***out***.println("기차번호를 입력해주세요");

**int** userNum = in.nextInt();

in.nextLine();

System.***out***.println("도착 시간을 입력하세요");

**int** userLate = in.nextInt();

in.nextLine();

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

**if** (train[i].trainNum == userNum && train[i].trainArr == userLate) {

saveTrain(i, 0, **null**, 0, 0);

}

}

}

**private** **void** TrainList() {

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

**for** (**int** i = 0; i < 5; i++) {

**if** (i == 0) {

System.***out***.print("기차번호 :");

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

System.***out***.print(" " + train[j].trainNum);

}

} **else** **if** (i == 1) {

System.***out***.print("기차종류 :");

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

System.***out***.print(" " + train[j].trainClass);

}

} **else** **if** (i == 2) {

System.***out***.print("도착시간 :");

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

System.***out***.print(" ");

**if** (train[j].trainArr < 1000) {

System.***out***.print("0");

}

System.***out***.print(train[j].trainArr);

}

} **else** **if** (i == 3) {

System.***out***.print("지연시간 :");

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

System.***out***.print(" " + (train[j].trainLate - train[j].trainArr) + "분");

}

} **else** **if** (i == 4) {

System.***out***.print("지연여부 :");

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

System.***out***.print(" ");

**if** (train[j].trainArr < train[j].trainLate) {

System.***out***.print("[지연]");

}

}

}

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

}

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

}

**private** **void** searchBoard() {// 새로운 변수 temp에 기차 도착 시간 순으로 버블정렬한다.

**int**[] temp = **new** **int**[train.length];

**int** t = 0;

**for** (**int** i = 0; i < train.length; i++) {// 저장되있는 배열을 출력을 위해 임시로 temp 배열에 trainArr복사.

temp[i] = train[i].trainArr;

}

**for** (**int** i = 0; i < temp.length - 1; i++) {// 버블정렬

**if** (temp[i] > temp[i + 1]) {

t = temp[i + 1];

temp[i + 1] = temp[i];

temp[i] = t;

t = 0;

}

}

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

**for** (**int** i = 0; i < 5; i++) {

**if** (i == 0) {

System.***out***.print("기차번호 :");

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

**for**(**int** k = 0; k<train.length; k++) {

**if**(temp[j] == train[k].trainArr) {

System.***out***.print(" " + train[k].trainNum);

}

}

}

} **else** **if** (i == 1) {

System.***out***.print("기차종류 :");

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

**for**(**int** k = 0; k<train.length; k++) {

**if**(temp[j] == train[k].trainArr) {

System.***out***.print(" " + train[k].trainClass);

}

}

}

} **else** **if** (i == 2) {

System.***out***.print("도착시간 :");

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

**for**(**int** k = 0; k<train.length; k++) {

**if**(temp[j] == train[k].trainArr) {

System.***out***.print(" " + train[k].trainArr);

}

}

}

} **else** **if** (i == 3) {

System.***out***.print("지연시간 :");

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

**for**(**int** k = 0; k<train.length; k++) {

**if**(temp[j] == train[k].trainArr) {

System.***out***.print(" " + (train[j].trainLate - train[j].trainArr) + "분");

}

}

}

} **else** **if** (i == 4) {

System.***out***.print("지연여부 :");

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

**for**(**int** k = 0; k<train.length; k++) {

**if**(temp[j] == train[k].trainArr) {

System.***out***.print(" ");

**if** (train[j].trainArr < train[j].trainLate) {

System.***out***.print("[지연]");

}

}

}

}

}

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

}

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

}

}

