CSCI 240

Qiguang Yang

Jordan Ringenberg

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Lab #5

#include <iostream>

#include <string>

#include <fstream>

#include <iomanip>

using namespace std;

void correcr\_A\_T\_Input(int &,int &);

int qualifyStatus(int,int);

void timeFormat(int &,int &);

int main(){

const int maxSize = 50;

int age[maxSize];

int time[maxSize];

int under30 = 0;

int between3050 = 0;

int over50 = 0;

int notQualify = 0;

int numReturn = 0;

int counter = 0;

ifstream inFile("race.dat");

cout << " Age " << "Time" << endl;

while(inFile >> age[counter]){

inFile >> time[counter];

correcr\_A\_T\_Input(age[counter],time[counter]);

numReturn = qualifyStatus(age[counter],time[counter]);

timeFormat(age[counter],time[counter]);

if(numReturn == 0){

notQualify ++;

}

else if(numReturn == 1){

under30 ++;

}

else if(numReturn == 2){

between3050 ++;

}

else if(numReturn == 3){

over50 ++;

}

counter ++;

}

cout << setw(40) << setfill('-') << "-" << endl;

cout << " Amount " << "Category" << endl;

cout << setw(40) << setfill('-') << "-" << endl;

cout << setw(6) << setfill(' ') << right << under30 << " ";

cout << "Under 30" << endl;

cout << setw(6) << setfill(' ') << right << between3050 << " ";

cout << "30 to 50" << endl;

cout << setw(6) << setfill(' ') << right << over50 << " ";

cout << "Over 50" << endl;

cout << setw(6) << setfill(' ') << right << notQualify << " ";

cout << "Didn't Qualify" << endl;

cout << setw(40) << setfill('-') << "-" << endl;

return 0;

}

void correcr\_A\_T\_Input(int &age,int &time){

int temp;

if(age > time){

temp = age;

age = time;

time = temp;

}

}

int qualifyStatus(int age, int time){

if(age < 30){

if(time < 300){

return 1;

}

else{

return 0;

}

}

else if(age >= 30 && age <= 50){

if(time < 360){

return 2;

}

else{

return 0;

}

}

else if(age > 50){

if(time < 420){

return 3;

}

else{

return 0;

}

}

}

void timeFormat(int &age, int&time){

int minutes = 0;

int seconds = 0;

minutes = time / 60;

seconds = time % 60;

cout << setw(6) << setfill(' ') << right << age << " ";

cout << minutes << "minutes " << seconds << "seconds" << endl;

}



