// 10664579

//assignment

#include<iostream>

#include<fstream>

#include<string>

#include<iomanip>

using namespace std;

const int MAX = 50;

void GetData(ifstream& infile,string name[],int scores[][5],int& n)

{

n = 0;

int i=0;

int j=0;

while(!infile.eof())

{

infile >> name[i];

for(int j=0; j<5; j++)

infile >> scores[i][j];

i++;

}

n = i;

}

char determineGrade(double avg)

{

if(avg>=90 && avg<=100)

return 'A';

else if(avg>=80 && avg<=89)

return 'B';

if(avg>=70 && avg<=79)

return 'C';

if(avg>=60 && avg<=69)

return 'D';

if(avg>=50 && avg<=59)

return 'F';

}

void Average(int a[][5],char grade[],double avg[],int no\_of\_students)

{

for(int i=0; i<no\_of\_students; i++)

{

double sum =0;

for(int j=0; j<5; j++)

sum+= a[i][j];

avg[i] = sum/static\_cast<double> (5);

grade[i] = determineGrade(avg[i]);

}

}

void PrintResults(string name[],double avg[],int scores[][5],char grade[],int n)

{

for(int i=0; i<n; i++){

cout << left << setw(10)<< name[i];

for(int k=0; k<5; k++)

cout << right << setw(8) << scores[i][k];

cout << endl;

}

cout << setw(8) <<"Average ";

for(int i=0; i<n; i++)

cout << setw(5) << avg[i];

cout << endl;

}

int main()

{

string name[MAX];

int scores[MAX][5];

char grade[MAX];

int no\_of\_students;

double avg[MAX];

ifstream infile("StudentData.txt");

if(!infile)

{

cout <<"unable to open file.so exiting from program" << endl;

return 0;

}

GetData(infile, name, scores, no\_of\_students);

infile.close();

Average(scores, grade, avg, no\_of\_students);

PrintResults(name,avg,scores,grade,no\_of\_students);

return 0;

}