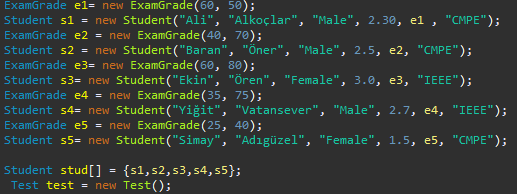
Midterm Project Report by Baran Öner

In the begining, I created my Person class. This class have 3 string fields, firstname, lastname and gender. It have 1 constructor, get and set methods for the fields and 1 toString method. Then I created my ExamGrade class. This class have 2 integer fields, midtermgrade and finalgrade. It have 1 constructor, get and set methods for the fields and 1 toString method as usual. Then I created my Student class. This class is a child class of the person class. So it extends to the person class. It have 4 unique field and 3 field from the person class. Fields are firstname, lastname, gender, gpa,studentID, examgrade and department. The unique fields types are these, studentID is integer, gpa is double, examgrade is ExamGrade and department is string. It have 1 constructor which creates a unique studentID, get and set methods for each field and 1 toString method.

After that I created a Test class for testing my upcoming methods.

My first method is SearchIndex. It takes student array and student id as the parameters and it returns the index of the student with given student id. It is using for loop to check all array and checks it if its studentID is equal to the parameter or not. Then it returns the i which is the Index of the student. If there is no such student it returns -1.



I created a student array for my tests in here.





As we can see when I wrote a wrong studentID(45) it prints -1 as it should be.And when I wrote the exact studentID in the 1 index it prints 1 as it should be.

My second method is UpdateGrade. It takes a student array, student id and examgrade. It updates the students examgrade to the given examgrade with the given id. It prints “no such student” if the arrays length is 0 which means there is no student. It is using for loop to check all array and checks it if its studentID is equal to the parameter or not. If it is equal it sets the parameter examgrade to the students examgrade. If the ID didn’t match to a student it prints “ID is not matched to this student”.



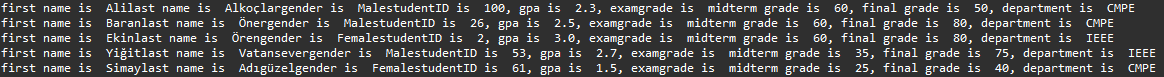
klavye, oturma, saat, bilgisayar içeren bir resim

Açıklama otomatik olarak oluşturuldu

As we can count in the first test It create 5 error case because the id is not matched with any of these student. But in the second test It matched with 1 student so it created 4 error case and sets the examgrade of the student to e3.

My third method is Show. It takes student array and prtins the all information with using the printf method. It is using the for loop to checking all of the array. I did -40s because I wanted to do it from left and large sized. I did s because student object is creating string because of the toString method.





As we can see It printed without any problem.

Then I created Randomgpa, Randomgender and Randomexamgrade methods for my Generate method.

My fourth method is Generate. It creates an array with default values and generate an array with random gender, gpa and examgrade values. The other values remains default as it should. It is using the for loop to create array as the student lenght number. And randomize specific values of it.





I used Show method as the question told me. As we can see It created default and random values succesfully.

My fifth method is Meangpa. I created it to print the mean of the students as the question told me. It creates the sum of the gpa’s in the given student array and divides it to the arrays length( which is the number of the students). It is using for loop to do the sum part all of the array. And makes the m value the sum of the gpa’s in the array. Then it divides it with the arrays length(which is the number of the students).



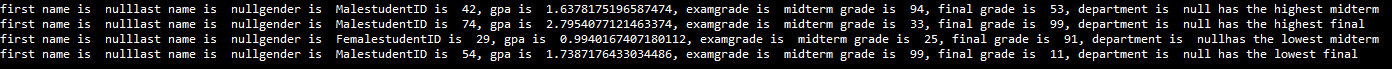


As we can see it printed without any problem.

In the last print part I used 4 methods . These methods compare the values of the students examgrades.

tutma, ekran, geniş, video içeren bir resim

Açıklama otomatik olarak oluşturuldu



As we can see it added the information of the methods to the right side. And works without any problem.

Note: I used eclipse in the dark mode thats why the backgrounds are black.