24621948 OLEKSANDR KUZHILNIY

Student Information System

To write a computer program implementing an information system that maintains a student group (faculty number, personal identification number, three names, list of subjects, gender, age, status-active/ interrupted/graduated). The program stores and processes data about the students in the group. The maximum number of students in a group is 30. Each student has 5 grades in the subjects (name, grade) from 1 semester

Basic task A.

Menu for selecting program functions.

The program features are:

B. Adding students to a group:

a. Adding students to the group by adding to the array, not exceeding the maximum number of students in one group (30).

Example: Adding a list of students. An integer **n** is entered followed by **n ,** the number of **n** cannot exceed the free elements in the array with students. **Valid** students . **grades are 0 – no grade, 2, 3, 4, 5, 6**

C. Displaying all students on the screen a. Displaying all students, using appropriate formatting in a table

D. Search and display on the screen:

a. Search and display students with a BP score in a specified interval [min – max]

b. Search and display students with at least one subject, with a grade of Weak 2 E. Sort and display students on the screen:

a. Sort students by last name alphabetically.

F. Working with an external file (binary or text):

a. Output the array of students to a file.

b. Inputting the array from a file.

Supplement one (+ basic task)

G. Create a submenu to the main one with new functions for:

a. Separation of students with a certain status (entered by the user) and sorting by faculty number.

b. Separating students with success in an interval (min - max) and sorting by personal identification number.

Supplement two (+ basic task)

H. Entering/Updating Grades and GPA for a Student

a. Add a grade point average field to the structure.

b. Data entry/update (grades and GPA) is done as entered student's faculty number.

i. If the student is present in the list(array):

1. Its status is checked:

a. Active – when entering/updating grades, the GPA is automatically calculated. Any grade change requires a change request! If there is no grade, it is updated without a request!

b. Interrupted/completed – cannot be updated ratings

c. If the student is not present in the list (array), an explanatory message is displayed on the screen.

I. Change of student status

a. The student's faculty number is entered (if available, the new status is also entered). If the status is active or interrupted, it is changed to the new one. If the status is completed, NO change is allowed!

Supplement three (+ basic task)

J. The data in the program should be automatically filled in from a file at startup and automatically **saved** to a file when the program is closed.