

## **DIRECTED WORK SERIES NO. 3 (THE FILES)**

Module: Algorithmic and data structures 2

Academic year: 2025/2026

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### **Exercise 1 :**

Consider the following record type:

**Type**

**Structure**Student

Number: integer;

Last\_name, First\_name: string;

Average: real;

**End Structure;**

Let **T** be an array of **N** students ( $N \leq 100$ ).

Write an algorithm allowing you to copy all the **admitted** students belonging to **T** into an **ADMIS file** of student type. A student is admitted if his average is greater than or equal to 10.

### **Exercise 2:**

Consider the following record types:

Type structure Date Day, month, year: integer; End Structure;	Structure TDiscipline Discipline: string ; Faculty: string; End Structure;	Structure Student Last name, First name : string; Date_Birth : Date; Sector : TDiscipline ; End Structure;
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Let **FStudent** be a file of students.

Write an algorithm that allows you to:

- Fill the **FStudent**file.
- Split the **FStudent**file into two files, **F\_MI** (students from the “MI” faculty) and **F\_Others** (students from other faculties).

### **Exercise 3 (supplementary):**

Consider the following type:

**Type**

**Structure** Product

Code: Integer;

Designation: String;

Price: real;

**End Structure;**

Let **FProduct** be a product file.

Write a Function that checks if the elements of **FProduct** are sorted in ascending order of their Code.