TP8 Data structures

Cinema Reservations

A cinema wants to develop a reservation management system for its cinemas. You can assume that the cinema has only one room and that reservations are made for specific seats in that room. Each movie shown is characterized by its :
  * Title
  * Start time
  * End time

Each reservation made by a client must be registered with the following information:
  * Client's Name
  * The reserved movie
  * Duration of the reservation in minutes
  * Reserved Seat Number

The program should include the following features:

1. Define appropriate data structures to represent movies, start and end times, and reservations. To do this :
   * Create a **Time** type with two fields: hour, minute (e.g. 18:30).
   * Create a **Movie** type as described above (for example. "Spiderman", 18:30, 20:30).
   * Create a **Resevation** type as described above
     (for example. "David" , "Spiderman", de 18 :30 à 20 :30 , 120 , 23).

2. Enter information about movies and reservations.

3. Write the **overlap()** function that checks if two reservations overlap. Two reservations overlap if they are for the same movie and if the reservation periods overlap in time.

4. The main program checks for overlapping reservations by browsing the reservation table and calling the function **overlap** for each pair of reservations and finally displays a message indicating whether or not two reservations overlap.

NOTE : Ensure that the program uses a reservation table to store reservation information.