

Mandatory: the project should compile and run without any errors.

You are asked to develop a **Windows Forms** application for managing the participants at a music festival.

(3p)

- Define the **Participant** class with the properties **Id** (int - constant), **Name** (string), **Email** (string), **BirthDate** (DateTime) and **Concerts** (List<string>). The class should contain a parametrized constructor.
- The instances of the class will be stored in a **List<T>** collection and will be displayed in the main form using a **DataGridView** control.
- An array of strings containing the names of 5 concerts, at your choice, named **concertArray**, will be declared and initialized in the main form.

(2p)

- The instances of the **Participant** class will be added using a secondary form, that will implement any necessary validations. The user will be able to choose the concerts that the participant is planning to attend using a **CheckedListBox** control, populated with the values in the **concertArray**.
- The user will be given the possibility to either modify (double click) or delete the records.

(1p)

- Implement the explicit **int** cast operator in order to return the number of concerts that each participant intends to attend. Add a button to the main form that will display in a read-only **TextBox** the total number of expected participations to all the concerts.

(2p)

- The list of participants will be **automatically** loaded when the application starts with the values retrieved from a database (Access, SQLServer sau SQLite). All the operations (add, update, delete) will be persisted to the database.

(1p)

- Implement the **IComparable<T>** / **IComparable** interface in order to sort the participants in ascending order based on their Name. The list of participants should be kept sorted all the time.

(1p)

- Add a **MenuStrip** control that will allow the user to exit the application and to save a text based report of the participants in a file located using the **SaveFileDialog** dialog.