Beginner Fortran 90 tutorial (part 4): Derived data types

Read the documentation in the tutorial `IntrFortran90.pdf` linked in the webpage on the Derived Data Types (Section 2.7).

Exercise 1: Create a short program that

- Creates a type called `birthdays` that contains the name of a person (as a character array), the day of their birth (as an integer), the month of their birth (as a character array) and the year of their birth (as an integer).
- Creates a variable of type `birthdays`
- Prompts the user to enter his/her name, and birthdate (in the format above), and saves it in the variable created above
- Prints it back to the screen

Exercise 2: Create a short program that

- Creates a type called `birthdays` as above
- Creates an array of variables of type `birthdays` called `students`
- Reads a data file called `Birthdays.dat` which contains the name of the students in the first column, the day of their birth in the second, the month of their birth in the third, and the year of their birth in the last column, and stores the results in the `students` array.
- Prompts the user for the name of a student, and returns his/her birthday.

Exercise 3: Modify the previous program to

- Create a type called `date` that contains the day (as an integer), the month (as a character array) and the year (as an integer).
- Creates a type called `birthdays` that contains the name of a person (as a character array), and their birthday (as a type `date`)
- Creates an array of variables of type `birthdays` called `students`
- Reads the data file `Birthdays.dat` (same as above) and stores the results in the `students` array.

- Prompts the user for the name of a student, and returns his/her birthday.

In this final case, you will effectively be creating a 2-level data structure...

You're now an expert in the use of Derived Data Types (well,... not quite, but good enough!)