# Foundation Introduction to Programming Coursework Assignment 3

## The Friston Leisure Club

You are required to create a Java application to administer a leisure club. The Friston Leisure Club was started in 2014. The Club’s members play indoor games such as pool, darts, 5-a-side football and table tennis. Members pay a membership fee each year in January.

The core application should administer the membership process and keep records of fees paid each year since 2014 by each member.

### After an interview with the Friston Leisure Club chairperson, it has been decided the core application will carry out the following functions:

1. Enroll a new member to the club.
   * Check year joined is valid
   * Feedback needed
2. Print out a list of all members with names and membership numbers.
   * Format list’s appearance
3. Locate and count all members who joined in a given year.
   * Check year is valid
   * Print details
4. Locate a member from their membership number.
   * Validate member number
   * Print details
5. Collect membership fees from any member for any year using member number to find the member.
   * Validate the member number
   * Check they have not already paid
   * Feedback needed
6. Print out the fee records for any given member.
   * Validate the member number
   * Format list’s appearance
7. Print out the fees paid by all members in a given year.
   * Validate year
   * Format list’s appearance
8. Print out a reminder for those who have not paid the fee for any given year.
   * Format list’s appearance
9. Remove a member from the club by member number
   * Feedback needed

## The Friston Leisure Club

After a second interview more details about the client’s requirements were agreed.

### Members

The application will record the member’s first name, surname and the year the member joined, starting at 2010. A unique membership number will be generated when the member is enrolled and added to the club records. This membership number will identify a member and cannot be changed once a member has been enrolled.

A record will also be kept of each member’s payments for each year from the year they joined.

### Club Records

There will be a list of members. This part of the application is responsible for enrolling and removing members. It checks that the year joined is not before 2014. This part is also responsible for all data processing and analysis.

### Notes on tasks

### Member

In order to keep records of the fees paid each year by each member there will be a 2 Dimensional Array containing integer data types. A member will be identified by Member Number in the ‘equals’ method. If members need to be sorted then a comparison method will be needed.

There will be a method that allows a member to pay the fee for any year. Before receiving a payment from a member, the application must check to see if the member has already paid for that year. There will be methods to find the fee paid by each member for any year and every year.

### Member Records

Lists will be used to store the records. Members ‘exist’ as a record. Lists need to be printed in a clear way with headings.