

## Lab 2 – RMI and HTML

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### 1. RMI

Write an RMI application to retrieve a patient's information by giving a *patient ID*. All patients' details are stored on the *Server* side program. The *Client* program can query the *Server* to get a patient's details by giving the *patient ID*. Please follow the steps below:

- a) Write the `Patient` class. A `Patient` should have an `id`, a `name` and a `yearOfBirth`. The `Patient` class should have a constructor (note that when a patient registers, they must provide their *ID*, *name* and *year of birth*), a set of accessors (i.e. `get` methods) and a `toString()` method to display the patient's details.
- b) Write an interface called `QueryInterface` that declares the `getPatient()` method. This method should take the `id` as a parameter and return the `Patient` object.
- c) Write the `QueryImpl` class to implement the `QueryInterface` interface. This class should store all the patients' information using an `ArrayList`.
- d) Write the `Server` class that adds four patients as below:  
1001, Tom, 1967  
1002, Sarah, 1986  
1003, Ben, 1975  
1004, Eileen, 1984
- e) Write the `Client` class. This class should take the *patient ID* from the command line argument, and print off the patient's details to the console.
- f) Compile and run this RMI application. You should produce similar output to the screenshots in **Figure 1**.
- g) **Questions:**
  - What are the steps (commands) to *compile* this program?
  - What are the steps to *run* this program?
  - What is a *Stub*?
  - What is the result of making an object `Serializable`?

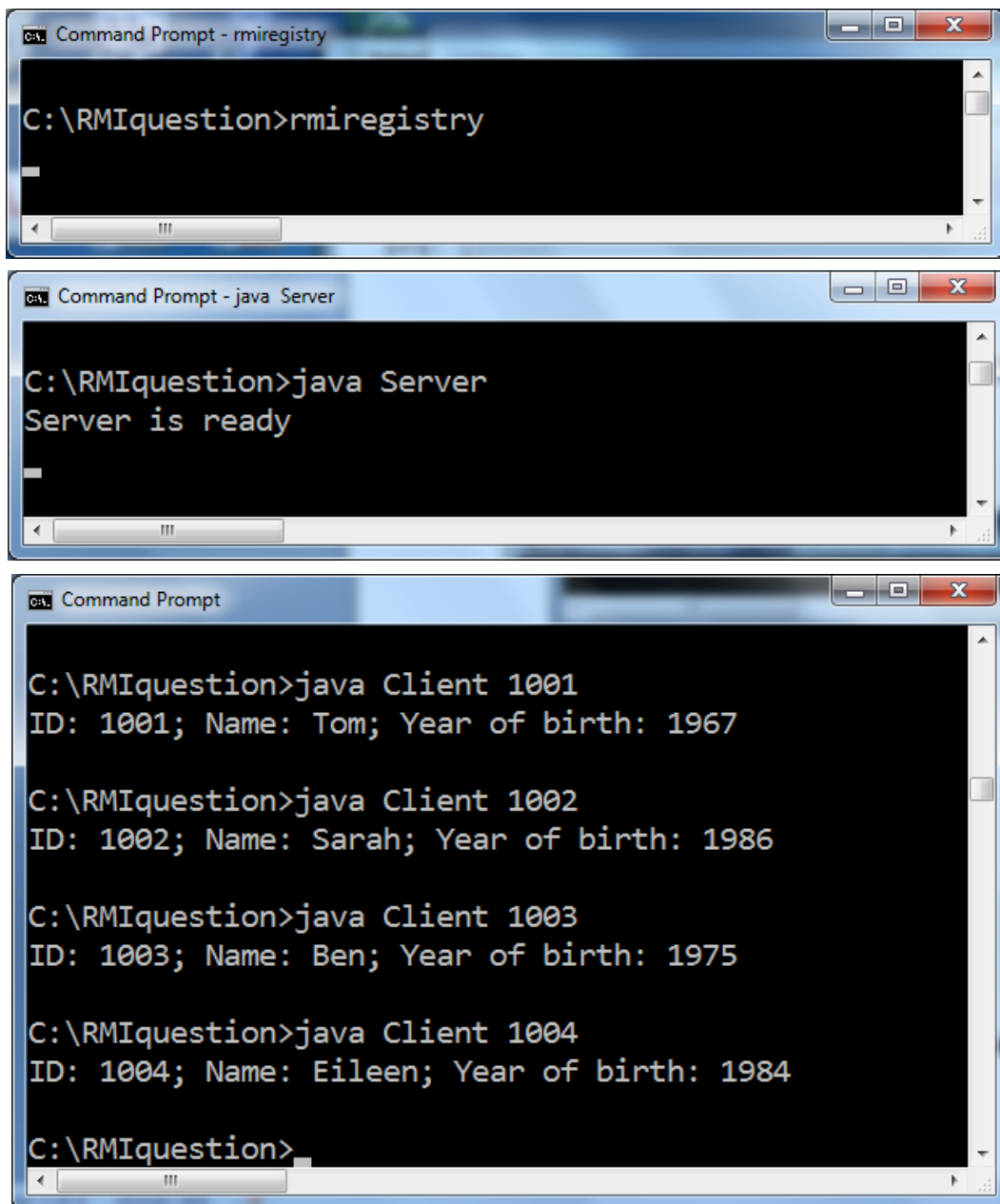


Figure 1

## 2. HTML

- a) Write the HTML code to generate the web page shown in **Figure 2**. The 12 Zodiac sign options are: **Aries**, **Taurus**, **Gemini**, **Cancer**, **Leo**, **Virgo**, **Libra**, **Scorpio**, **Sagittarius**, **Capricorn**, **Aquarius** and **Pisces**. Open this HTML file in a web browser.
- b) **Questions:**
- What is HTML? How does it relate to HTTP?
  - In HTML, you can have input of type **submit**, together with an associated button (like the **submit** button in **Figure 2**). What is supposed to happen when you click that button?

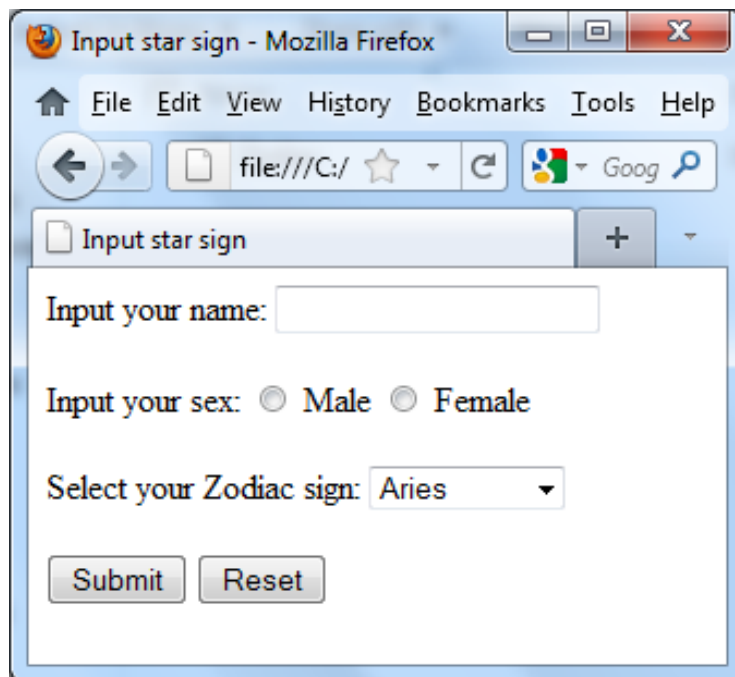


Figure 2

**END of Lab 2: “RMI and HTML”**