**Milestone2 Agenda**

* **Motivation for the Idea**

In addition to the basic functions of an Olympic Games database, we would like to conduct some interesting queries such as “Is there a limitation on the strength/speed of mankind”, “Is the total performance of a nation in Olympic Games dependent on its population scale” We are curious about whether the sky is the limit, and we regard these questions as a way of interpreting the so-called Olympic Spirit.

* **Basic Features**

Our web application can be divided into three kinds of queries, namely (1) queries based on sports events (2) queries based on national performance and (3) rankings.   
In section (1), we expect this database to be capable of answering questions like “what is the development tendency of Olympic records” or “how are the performance of silver winners compared to corresponding gold winners in history”.  
In section (2), our DB should be able to do some statistics that are grouped by countries. In other words, it counts the total medals achieved by a nation and it can calculate the number of Olympic medals per capita.  
In section (3), this DB does some sorting based on either a sport event or a nation. i.e. It can return the ranking of medals achieved by different countries in a single Olympic game, or it can return the total historical ranking of medals achieved by different countries.

* **Advanced Features**We visualized the results of the queries and demonstrated them via figures, charts and cartoons. Simple statistical efforts such as fitting and regression was also applied in order to indicate the trends of Olympic records.
* **Technology and Tools Used**The back-end of this database will rely heavily on SQL and relational schemas while Node.js is adopted as the front-end platform of displaying the queries. MongoDB, as an additional, alternative solution, might be used as well if necessary.
* **Complimentary Sources**

In addition to the provided .csv file we will gather information from XML sources such as webpages. We will ingest the data via parsing the source code of the websites and injecting them to the relational database.

Athlete Records: <http://www.theolympicdatabase.nl/olympic/sports>

Population: <https://en.wikipedia.org/wiki/List_of_countries_by_past_population_(United_Nations,_estimates)>

* **Member Responsibility**Jiawei Liu: Query handling, Node.js technical support (22% workload)

Jiapo Tai: Database setup, data parsing and import preprocessing (22% workload)

Hongru Du: Schema design, data parsing, cleaning and insertion (22% workload)

Yuechen Luo: Node.js design and coding (34% workload)

* **Schema Design**

/Users/hongrudu/Downloads/ER_161123 (1).png