Cloud Computing Homework #3

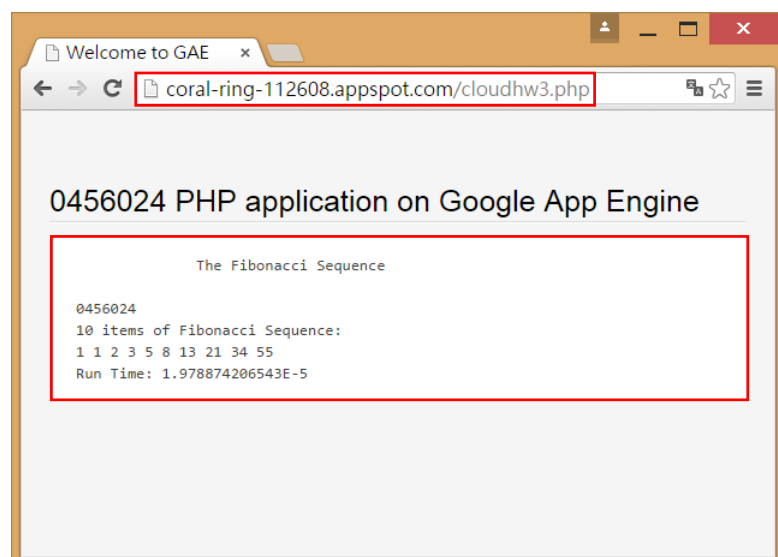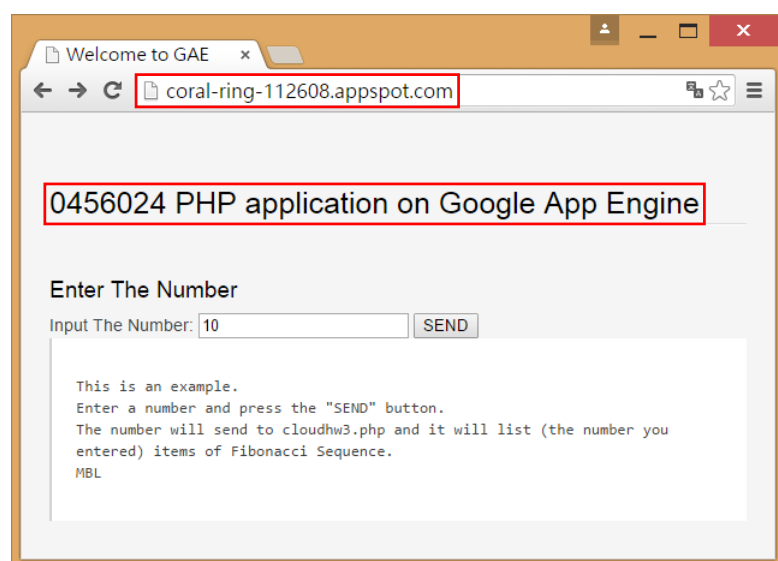1.

• Google App Engine − application setup

2.

• Google App Engine − application execution

3.

• Google Analytics − tracking property settings

• Google Analytics − audience overview reporting

4.

Google App Engine is a platform as a service for developing and hosting web applications. Google App Engine applications are easy to build, easy to maintain, and easy to scale on demand. With built-in services and APIs such as load balancing, security scanning, user authentication, application logging, users can focus on their products without worrying about system administration. These resources are free within a usage limit which is reset daily, and fees are charged for additional storage, network traffic, or instance hours, etc. Users can monitor resource usage through application dashboard on real-time.
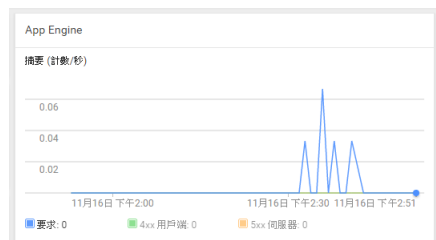
Google Analytics is a free analytics service for website traffic, and it is the most widely used one on the Internet. Google Analytics is implemented with a JavaScript tags, called the Google Analytics Tracking Code, which users adds to interested websites. The Google Analytics Tracking Code runs in the browser when the client browses the page, and collects visitor data then sends it to a data collection server as part of a request for a beacon.

Google Analytics collects a lot kinds of visitor data such as demographics (age, gender), interests (affinity categories, in-market segments), geo (language, location), behavior (new or returning, frequency and recency, engagement), technology (browser and operating system, network), mobile (device), etc.

For such a popular service, there are still some limitations on Google Analytics: (1) ad filtering programs and extensions will block the Google Analytics Tracking Code and prevent some traffic from being tracked, (2) privacy networks will mask the users' actual location and present inaccurate geographical data, (3) JavaScript-unable or JavaScript-disable browsers will make the Google Analytics Tracking Code unworkable, (4) deleting or blocking Google Analytics cookies will resulting in data loss, (5) the use of sampling in the generation of its reports will increase margin of error of data. The following is the scenario of inaccurate geographical data that most traffic should come from Hsinchu rather than Taipei.