**5)      Non-Functional Requirements**

a.       2-4 non-functional requirements

b.       Short name brief description

c.       Ex: Speed – include numbers for measurement criteria

d.       Secure? Usable? **Accessible**? Robust? **Scalable**?

- So long as the reference websites are up and available, our program will be able to pull new information.   
- If the websites are down the program will still be able to run provided there has been previous price history from preceding runs.   
- System must be Windows Computers having Excel preinstalled.   
- Decent runtime (have the results displayed within **10 seconds**?)  
- Scalability – go from only populating from the first page of results from the website forward to having the ability to navigate to the next page of results.

Scalability:

* The application will be **able to scale beyond a single page** of the scraping websites.

After meeting the minimum viable product requirements that allow the application to scrape a single page, all initial difficulties would have been resolved. This makes it easier to navigate any additional web pages within a product site as needed.

* The application will be able to **expand to include other websites**. This will require a modular approach to development, which will enable the web scraper to easily navigate and retrieve content from other web sites whenever requirement changes in the future. For example, when the demand for more graphics card price comparison is needed beyond the initial three websites stated, the software can effectively be expanded to allow scraping of additional sites (2 more sites).
* The web scraper will be able to **expand to include different products**. When demand changes (the need to view different product beside video cards), the software can be extended to scrap one additional product within those three listed sites.
* The web scraper **can handle multiple users**. This capability is intrinsic by virtue of it being a desktop application. By making it a lightweight desktop application, each user will have it installed locally on their machine, thereby avoiding the need for concurrent operations and data inconsistency.

Performance:

* The **load time** for the web scraper must be no more than **10 seconds** for users with reliable internet access.
* The application **will be robust** in handling errors. In case of error, it will display the following error message page:

*“Something went wrong. Application will shut down now. Please try again in a few minutes, thank you”*