# Non-functional requirements. Performance

* What is the acceptable time taken to load (render) the full screen (with all images and buttons) of the application after clicking the icon, link or button?
  + About 55% of users will abandon a website after 3 seconds of loading, so 3 to 5 seconds should be maximum time to take.
* What is the acceptable time the GUI can take to respond to action performed by user, e.g. click button to go to next screen?
  + 0.1 second – the limit after which the system reaction doesn’t seem instantaneous;
  + 1 second – when the user will notice the delay, but the flow of thought won’t be interrupted (altexsoft, 2022).
* Read/Write ratio: R:W::90:10
  + Assuming an average usage of 10 minutes per user per day, with a read request made every 5 seconds
* What are the hours of operation for the system?
  + Service works 24/7
* What are the peak hours of operation for the system when most people will be using it?
  + Weekends afternoon. Since a lot of people have free time to explore Bath then
  + Workdays morning and afternoon. People tend to plan their travels during this time.
* What is the total number of system users?
  + Based on six-million-plus annual visitors of Bath, we are looking at 1,000,000 users per year (percent of tourists from discriminated groups plus regular Bath citizens) in two or three years from launching the product.
* What is the number of users likely to use the system at any one time?
  + 5,000 users on average during the day and 1,000 at night
* What is the total number of concurrent system users during peak hours?
  + ~1000 (average number of users per day is 2,500)
* What is an acceptable response time to perform an action? (to be edited per application where applicable). For example, login, query, update, upload.
* What is the impact of not meeting this requirement?
  + Users may abandon the application – that is the worst result and the one we should focus on.
* Under normal business conditions, when is the start of day and end of day?
  + 08:00 till 20:00, so we cover morning and evening
* What is the impact if the data presented on screen is out of date or inaccurate?
  + High impact, high priority, medium complexity to manage

## Resources:

Web.dev. (2024). PageSpeed Insights. [online] Available at: <https://pagespeed.web.dev/analysis/https-consent-google-com-m/d4ucx1b3ig?form_factor=mobile> [Accessed 7 Nov. 2024].

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Haq, F. ul (2024). Guide to nonfunctional requirements for System Design Interviews. [online] Medium. Available at: <https://learningdaily.dev/guide-to-nonfunctional-requirements-for-system-design-interviews-761892fbd95d> [Accessed 7 Nov. 2024].

Bathnes.gov.uk. (2022). Visitors and tourists | Bath and North East Somerset Council. [online] Available at: <https://www.bathnes.gov.uk/journey-net-zero-public-consultation-january-2022/visitors-and-tourists> [Accessed 7 Nov. 2024].

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