Computer Availability Tracking System

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Traditional methods of determining a computer’s availability are time consuming to the users in the library. Remotely checking the computer’s availability needs to have an application which displays the status of the computer, i.e., whether it is available or busy and also gives the corresponding location of the computer. Computer Availability Tracking System (C.A.T.S) is an in-house developed online application designed to track the computer availability that grants students a complete tracking functionality of available computers. It is designed specifically to accommodate student needs and to assist them accordingly. Static IP addresses are fixed and are mostly used in real time application like VoIP protocol. In a DHCP (Dynamic Host Configuration Protocol) environment, IP addresses are dynamic. Dynamic IP addresses may change each time a user logs in by their computer name. It enables the users to bootstrap into the computer with ease and it allocates the IP addresses dynamically. C.A.T.S database has the updated IP address that pings by using the name of the computer by its corresponding IP address. The final result gives a computer availability map with added backend logic SQL server and scripting functionality with ASP.net and C#. C.A.T.S is built to assist the needs of the students by tracking and displaying the status of the computer in the library.

Designing of the availability maps includes creation of a database with SQL server 2008 R2, and running a C# program on client computers in background that updates the IP addresses in the database at regular intervals of time. Designing includes panel, update panel, timers and image buttons that are done with the ASP.net scripting language. In addition there is a feature to check the list of available software in that particular PC. The tracking system has an available palette of 3 colors, which gives information of the system as to whether it is available, busy or malfunctioned. Besides, glitches in the computer are known by this tracking system. So C.A.T.S is an efficient as well as an easier approach to find the status (availability) of a computer. Future work will address the implementing of last login time and duration of a system when it is busy.