SWEN90002 - Engineering for Internet Applications

Lab Week 1

Group 5

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1. Drawbacks of using network address translation, as opposed to using a unique IP address.
   - One of the main issues with using NAT is that some protocols that have an IP address as part of their package might not work in a network with NAT e.g FTP, X windowing systems, IPSEC.
   - In some situations there is a need for a remote system to initiate a connection with a client being a NAT connection, this is a bit harder to do with NAT as opposed to having a unique IP address.
   - In order to faciliate some of the connections not possible via NAT, workarounds need to be put in place which can cause performance degradation.
2. See code files
3. Java Refresher
4. What is the purpose of the timeout argument? *Time out argument is to set the maximum length the function should try reaching the address before giving up.* -If an IOException is thrown by isReachable, what would be an appropriate action to take and why?

5. You should catch the error using a try/catch and print out or send back a message to inform the user/client that the hostname/address they entered cannot be reached. You should do this because the program might need to contact the server down the line.

6. Outputs for inputs "localhost, www.unimelb.edu.au, yahoo.com, google.com"

   ```
   * Found: localhost=127.0.0.1 and is reachable
   * Found: www.unimelb.edu.au=128.250.148.40 and is not reachable
   * Found: yahoo.com=98.139.183.24 and is not reachable
   * Found: google.com=220.244.223.88 and is not reachable
   ```

7. div tag is used as a page divider for html web pages, it is used to create sections or

blocks of content on a web page. A span tag is used to group a section of text. Key difference between both are divs create blocks of content while a span is an inline element, also spans can be found in divs but divs should not be nested in spans