OLLSCOIL NA hÉIREANN
THE NATIONAL UNIVERSITY OF IRELAND, CORK

COLÁISTE NA hOLLSCOILE, CORCAIGH
UNIVERSITY COLLEGE, CORK

CLASS TEST 2009-2010 (SAMPLE)

CS2510 Web Servers

Dr. D.G. Bridge

Time allowed: Forty-five minutes

The Apache Web server runs on a machine which listens on port 80 on IP address 192.168.0.0. Apart from the core modules and an MPM, only the following modules have been statically-compiled and linked into the Apache executable: `mod_mime`, `mod_autoindex`, `mod_alias`, and `mod_authz_host`. The `httpd.conf` file contains:

```
Listen 192.168.0.0:80

ServerRoot /usr/local/apache

ServerName www.exam.ie
DocumentRoot /htdocs/www

ErrorDocument 404 /errors/not_found.html
ErrorDocument 403 /errors/not_permitted.html

Options -Indexes

Alias /images /htdocs/images

<Directory />
    AllowOverride None
</Directory>

<Directory /htdocs/www/downloads>
    AllowOverride All
</Directory>
```

Recall that the path in an `ErrorDocument` directive is appended to the document root to give the location of the customized error document.

The directory `/htdocs` contains the following:

- `www`
    - `.htaccess`
    - `index.html`
    - `errors`
        * `not_found.html`
        * `not_permitted.html`
    - `downloads`
        * `.htaccess`
        * `index.html`
        * `doc1.pdf`
        * `doc2.pdf`

- `images`
    - `logo.gif`
    - `photo.jpg`

The file `/htdocs/www/.htaccess` contains the following:

```
Deny from All
```

The file `/htdocs/www/downloads/.htaccess` contains the following:

```
Allow from 192.168.0.1
```

Assume all file permissions are correctly set.

Ten HTTP requests arrive at port 80 on IP address 192.168.0.0; in the first nine of them the client's IP address is 192.168.0.1, and in the last one the client's IP address is 192.168.0.2. For each request below:

- state what the contents of the response body will be, in particular give the absolute pathname of the file, if any, that will be served in the response body; and

- explain in detail why this response body will be served.

1. Arriving from client 192.168.0.1:
```
GET /index.html HTTP/1.1
Host:  www.exam.ie
```

2. Arriving from client 192.168.0.1:
```
GET / HTTP/1.1
Host:  www.exam.ie
```

3. Arriving from client 192.168.0.1:
```
GET /.htaccess HTTP/1.1
Host:  www.exam.ie
```

4. Arriving from client 192.168.0.1:
```
GET /images/logo.gif HTTP/1.1
Host:  www.exam.ie
```

5. Arriving from client 192.168.0.1:
```
GET /images/ HTTP/1.1
Host:  www.exam.ie
```

6. Arriving from client 192.168.0.1:
```
GET /photo.jpg HTTP/1.1
Host:  www.exam.ie
```

7. Arriving from client 192.168.0.1:
```
GET /downloads/doc1.pdf HTTP/1.1
Host:  www.exam.ie
```

8. Arriving from client 192.168.0.1:
```
GET /downloads/ HTTP/1.1
Host:  www.exam.ie
```

9. Arriving from client 192.168.0.1:
```
GET /downloads/index.html HTTP/1.1
Host:  www.exam.ie
```

10. Arriving from client 192.168.0.2:
```
GET /downloads/ HTTP/1.1
Host:  www.exam.ie
```