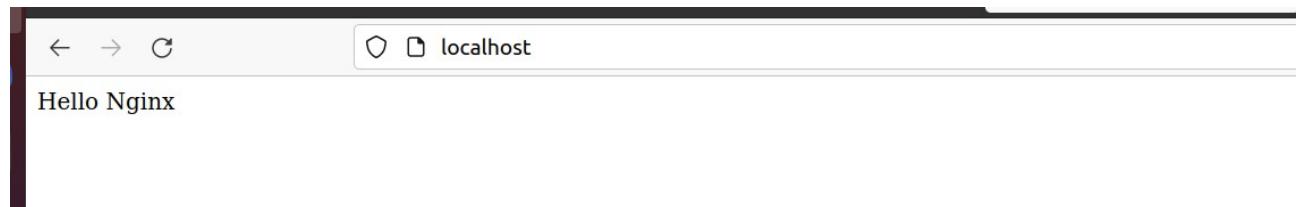


Q1.

```
sudo apt-get install nginx -y
cd //var//www//html//
vim index.html
<html>
<body>
<p>Hello Nginx</p>
</body>
```

```
</html>
```

```
sudo systemctl start nginx
sudo systemctl enable nginx
```



Q2..

Security headers are directives used by web applications to configure security defenses in web browsers. Based on these directives, browsers can make it harder to exploit client-side vulnerabilities such as Cross-Site Scripting or Clickjacking. Headers can also be used to configure the browser to only allow valid TLS communication and enforce valid certificates, or even enforce using a specific server certificate.

They are directives to increase the protection and create more defense against vulnerabilities using browsers. For example, they modify the behavior of web browsers to avoid security vulnerabilities just to accept one kind of valid server certificate like TLS.

```
mkdir -p /var/www/test1.com/public_html
vim index.html
    testing test1

cd //etc//nginx//sites-available//
mv default default-bk
cd ../sites-enabled
rm default

cd //etc//nginx//conf.d//
touch test.conf
    server {
        listen 81;
        listen [::]:81;
        root /var/www/test1.com/public_html;
        index index.html;
        server_name test1.com www.test1.com;
        add_header Strict-Transport-Security "max-age=63072000; includeSubdomains;" always;
        add_header X-Frame-Options "SAMEORIGIN" always;
        add_header X-XSS-Protection "1; mode=block" always;
        add_header X-Content-Type-Options "nosniff" always;
        add_header Content-Security-Policy "default-src 'self'; font-src *;img-src * data:; script-src *; style-src *;" always;
        add_header Referrer-Policy "strict-origin-when-cross-origin" always;

        location /test1.com {
            try_files $uri $uri/ =404;
        }
    }

nginx -t
systemctl restart nginx
```

The screenshot shows the Network tab in the Chrome DevTools. It lists two requests:

- A 304 Not Modified response for the URL '/' with a size of 14 B. The initiator is 'BrowserTabChild.js...' and the type is 'html'. It was cached.
- A 404 response for the URL 'Favicon.ico' with a size of 162 B. The initiator is 'FaviconLoader.jsm:1...' and the type is 'html'. It was also cached.

On the right side, there is a detailed view of the 304 response for '/' with expanded sections for Response Headers and Request Headers.

| Status | Method | Domain       | File        | Initiator              | Type | Transferred | Size  |
|--------|--------|--------------|-------------|------------------------|------|-------------|-------|
| 304    | GET    | localhost:81 | /           | BrowserTabChild.js...  | html | cached      | 14 B  |
| 404    | GET    | localhost:81 | Favicon.ico | FaviconLoader.jsm:1... | html | cached      | 162 B |

Q3.

```
cd //etc//nginx//conf.d//
touch test2.conf
vim test2.conf
server {
    listen 82;
    location / {
        proxy_pass http://localhost:6080;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection 'upgrade';
        proxy_set_header Host $host;
        proxy_cache_bypass $http_upgrade;
        proxy_http_version 1.1;
        proxy_set_header X-Real-IP $remote_addr;
    }
}
```

```
nginx -t
systemctl restart nginx
```

The screenshot shows a browser window with the address bar set to 'localhost:82'. The page content displays the text 'Hello Node JS'.

Q4.

```
cd //var/www//test1.com//public_html//  
mkdir -p test2.com/html/  
cd test2.com/html/  
touch index.html  
vim index.html  
pwd  
cd /etc/nginx/conf.d/  
ls  
cp test.conf test3.conf  
vim test3.conf  
server {  
    listen 83;  
    listen [::]:83;  
    root /var/www/test1.com/public_html/test2.com/html;  
    index index.html;  
    location /{  
        try_files $uri $uri/ =404;  
    }  
}  
}
```

```
nginx -t  
systemctl restart nginx
```

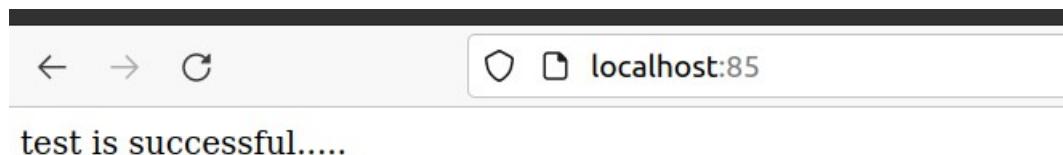


test is successful.....

Q5.

```
cd //etc//nginx//conf.d//  
touch rev-p.conf  
ls  
cat test2.conf  
cp test2.conf rev-p.conf  
vim rev-p.conf  
  
server {  
    listen 85;  
    location / {  
        proxy_pass http://localhost:83;  
        proxy_set_header Upgrade $http_upgrade;  
        proxy_set_header Connection 'upgrade';  
        proxy_set_header Host $host;  
        proxy_cache_bypass $http_upgrade;  
        proxy_http_version 1.1;  
        proxy_set_header X-Real-IP $remote_addr;  
    }  
}
```

```
nginx -t  
systemctl restart nginx
```



Q6.

```
sudo apt install php-fpm  
cat test.conf  
vim test.conf
```

```
server {  
    listen 81;  
    listen [::]:81;  
    root /var/www/test1.com/public_html;  
    index index.html index.php;  
    server_name test1.com www.test1.com;  
    add_header Strict-Transport-Security "max-age=63072000; includeSubdomains;" always;  
    add_header X-Frame-Options "SAMEORIGIN" always;  
    add_header X-XSS-Protection "1; mode=block" always;  
    add_header X-Content-Type-Options "nosniff" always;  
    add_header Content-Security-Policy "default-src 'self'; font-src *;img-src * data:; script-src  
    *; style-src *;" always;  
    add_header Referrer-Policy "strict-origin-when-cross-origin" always;  
  
    location /test1.com{  
        try_files $uri $uri/ =404;  
    }  
  
    location ~ \.php$ {  
        include snippets/fastcgi-php.conf;  
        fastcgi_pass unix:/var/run/php/php7.4-fpm.sock;  
    }  
  
    location ~ ^\.ht {  
        deny all;  
    }  
}  
  
cd /var/www/test1.com/public_html/  
ls  
vim info.php  
    <?php  
    phpinfo();  
?>
```

```
systemctl restart nginx
```

localhost:81/info.php

## PHP Version 7.4.3

System Linux saroj-Inspiron-3576 5.11.0-40-generic #44~20.04.2-Ubuntu SMP Tue Oct 26 18:07:44 UTC 2021 x86\_64

Build Date Oct 25 2021 18:20:54

Server API FPM/FastCGI

Virtual Directory disabled

Support Configuration File /etc/php/7.4/fpm

(php.ini) Path /etc/php/7.4/fpm/php.ini

Loaded Configuration File /etc/php/7.4/fpm/php.ini

Scan this dir for additional .ini /etc/php/7.4/fpm/conf.d

files /etc/php/7.4/fpm/opcache.ini, /etc/php/7.4/fpm/conf.d/10-pdo.ini, /etc/php/7.4/fpm/conf.d/20-calendar.ini, /etc/php/7.4/fpm/conf.d/20-ctype.ini, /etc/php/7.4/fpm/conf.d/20-exif.ini, /etc/php/7.4/fpm/conf.d/20-ffi.ini, /etc/php/7.4/fpm/conf.d/20-finfo.ini, /etc/php/7.4/fpm/conf.d/20-ftp.ini, /etc/php/7.4/fpm/conf.d/20-gettext.ini, /etc/php/7.4/fpm/conf.d/20-iconv.ini, /etc/php/7.4/fpm/conf.d/20-json.ini, /etc/php/7.4/fpm/conf.d/20-phar.ini, /etc/php/7.4/fpm/conf.d/20-posix.ini, /etc/php/7.4/fpm/conf.d/20-readline.ini, /etc/php/7.4/fpm/conf.d/20-shmop.ini, /etc/php/7.4/fpm/conf.d/20-sockets.ini, /etc/php/7.4/fpm/conf.d/20-sysvmsg.ini, /etc/php/7.4/fpm/conf.d/20-sysvsem.ini, /etc/php/7.4/fpm/conf.d/20-sysvshm.ini, /etc/php/7.4/fpm/conf.d/20-tokenizer.ini

PHP API 20190902

PHP Extension 20190902