Cookies :

① Cookies are small amount of data stored on a web browsers or users browser.

② They are used to store information between web request and maintain state in stateless Environment.

③ web request are HTTP request. & HTTP is a stateless protocol. That is each request is treated as new, independent event. The system doesnot retain any data about client's previous request.

④ Cookies are usefull for remembering users preferences, login sessions, tracking user activity.

⑤ setcookie (name, value, expire, path, domain, secure, httponly)

⑥ name :- Name of the cookie

Value :- value to be stored inside a cookie

Expire :- Expiration ~~Timestamp~~ Time in UNIX timestamp.

if set to '0' or ommited cookie get expired after the end of session. That is cookies can be set as session cookies (deleted when the browser closes) or persistent (stored for a specific period).

UNIX timestamp is a way to represent time in seconds. It is a single integer representing a no. of seconds and also timezone independent. Also cross platform i.e. supported across many platforms and programming language.

* Use the time () function to get the current timestamp.

* Add the number of seconds after which the cookie should expire to the current time. pass this Expiration time to setcookie().

Page No. ______
Date : / /

* Cookies that get expired in one days.

```
$cookie_name = "user";
$cookie_value = "gaurav";
// set the cookie expire in one day (1 day = 86400 seconds)
setcookie ($cookie_name, $cookie_value, time() + 86400, "/");
```

* cookies that get expired after 30 days.

```
setcookie ($cookie_name, $cookie_value, time() + (86400 * 30), "/");
```

* The path attribute in a cookie specifies the URL path or directory on the server for which the cookie is valid. The cookie will only be sent to server if the requested URL matches or under the specified path.

* The path restricts where the cookies is accesible within the domain. If the cookie is set for specific path it will only be sent to that path or subdirectories under it.

* If the path is not ~~set~~ specified when setting a cookie default path is the directory where the cookie was set.

* Explicitly set path to '/' so the cookie is accesible to entire website.

* if set for /folder/, will only be accesible to /folder/ or any subdirectories like /folder/subfolder/.

```
setcookie ($_cookiename, $cookie_value, time()+ 86400,
   "/folder/", "", example.com");
```

L cookie will be available ~~to~~ for requests to URLS that start with /folder/ such as

https:// example.com/ folder/ or
https:// example.com/ folder/ page.html.

* This path attribute allows fine controll over which parts of the website can acces the cookie.

* The Domain attribute in a cookie specifies which domain the cookie is accesible to. It defines which website or subdomains can create or modify the cookie.

If domain is not specified it is only accesible to domain that created that cookie.

Cookies cannot be shared between different domains cookie set for example.com cannot be accesed by other.com

• example.com. L example.com : sub. example.com } • [app. example.com forum. example.com]

* set the secure attribute to "true" to ensure the cookie is only sent over the HTTPS connections. important for sensitive data like session ID's.

* The HTTPonly attribute set to "true", prevents javascript from accessing the cookie which is usefull for preventing XSS (cross-site-attack).

```
setcookie ($cookiename, $cookie-value, time() + 3600, "/",
    true, true);
```

* Example to store login state in a cookie, so the user doesn't need to login each time.

```
  // After login
  setcookie ("logged-in_user", "gfs", time() + (86400*7),
   "/");
   // on subsequent visit
  if (isset ($_COOKIE['logged_in_user'])) {
        echo "welcome back", . $_COOKIE['
      logged_in_user'];
      }
```

* Remembering user preferences:- use cookies to store user preferences like language or theme selection

```
      // set users theme preference
   setcookie ("theme", "darkmode", time() + 86400, "/");

      // check & apply users theme preference
   if (isset($_cookiE['theme'])) {
          $theme = $_COOKIE ['theme'];
          }
   else {
          $theme = "light_mode";
          }
```

* Browsers typically limit cookies to 4KB each & max num of 20-50 cookies per domain.
* Avoid overuse. Dont store data that can be retrived from server on each request.
* use consent before setting cookies. ex shows of cookies consent pop-up before setting cookies.

GDPR: general data protection regulation