

What is CSRF protection in Django, and how does it work?

CSRF (Cross-Site Request Forgery) is a security measure that prevents malicious websites from making unauthorized requests on behalf of authenticated users.

How CSRF Protection Works in Django:

- **CSRF Token:** Django generates a unique, secret token for each user session.
- **Token Verification:** When a user submits a form (e.g., logging in, updating a profile), the form must include this token.
- **Middleware Check:** Django's CSRF middleware checks the token from the form against the token stored in the session. If they match, the request is allowed. Otherwise, it is rejected.

Using CSRF in Django:

- Add `{% csrf_token %}` inside forms in templates:



```
1 <form method="POST">
2     {% csrf_token %}
3     <input type="text" name="name">
4     <input type="submit" value="Submit">
5 </form>
6
```

What are Django cookies, and how do they differ from sessions?

FEATURE	COOKIES	SESSIONS
DEFINITION	Small pieces of data stored in the user's browser.	Server-side storage mechanism for user data.
STORAGE LOCATION	Stored in the user's browser.	Stored on the server (database or cache).
PURPOSE	Track user preferences (e.g., remember me).	Store user-specific information (e.g., login status).
SECURITY	Less secure (stored on client-side).	More secure (data is stored on the server).
EXPIRATION	Can be set to expire after a specific time.	Usually tied to the user's session and expires automatically.
SIZE LIMIT	Limited (usually 4KB).	Can store more data since storage is on the server.

```
1 # Example of Setting a Cookie:
2 def set_cookie(request):
3     response = HttpResponseRedirect("Cookie Set")
4     response.set_cookie('username', 'sushant', max_age=3600) # Expires in 1 hour
5     return response
6
7
8
9
10
11
12 # Example of Setting a Session:
13 def set_session(request):
14     request.session['username'] = 'sushant'
15     return HttpResponseRedirect("Session Set")
16
```