



## Digital World of Cookies

**For Prelims:** [Right to Privacy](#), Session Cookies, Third-party Cookies, Cross-Site Request Forgery.

**For Mains:** Challenges Related to Emerging Technologies, Digital Personal Data Protection Act 2023.

[Source: TH](#)

### Why in News?

As the ever-evolving digital landscape continues to reshape online experiences, **cookies emerge as dual agents**, serving as **indispensable facilitators of personalization and convenience**, yet concurrently posing significant challenges in the domains of [user privacy](#) and [data security](#).

### What are Cookies?

#### ▪ About:

- In the realm of computing and web browsing, cookies are small pieces of data stored on a user's device (browser), commonly as text files.
- These **files are generated by the websites** a user visits and serve the purpose of retaining information regarding the user's interactions and preferences during their online navigation.

#### ▪ Categories of Cookies

- **Session Cookies:** Temporary in nature, **these cookies function as digital post-it notes for websites**, residing in a user's computer memory **solely during active browsing sessions**.
- **Persistent Cookies:** Analogous to **digital bookmarks**, persistent cookies endure on the **user's device beyond the conclusion of a browsing session**.
  - They retain and recall information such as login credentials, language preferences, and previous interactions with advertisements.
- **Secure Cookies:** Distinguished by their **transmission over [encrypted connections](#)**, these cookies are employed primarily for safeguarding sensitive data, such as login credentials.
- **Third-party Cookies:** Originating from domains distinct from the one currently being visited, these cookies are frequently employed for tracking and advertising purposes, offering both utility and the potential for intrusion.

#### ▪ Role of Cookies

- **User Authentication:** Functioning as **digital identity cards**, cookies assist websites in recognizing and preserving user login statuses throughout their visits.
- **Personalization:** Cookies enable the **retention of user preferences**, encompassing language selections and website themes.
- **Persistent Shopping Carts:** They ensure that **items added to [online shopping carts](#) remain accessible** even upon subsequent returns.
- **Analytics:** Cookies aid website proprietors in the **collection of valuable data concerning user interactions**, thereby facilitating enhancements and tailored content delivery.

- **Targeted Advertising:** Advertisers employ cookies to showcase advertisements that **correspond with user interests and previous browsing histories**, enhancing the allure of online shopping.
- **Associated Challenges**
  - **Privacy Concerns:** Cookies possess the **capability to track user online behavior**, raising concerns about potential intrusions into digital privacy.
    - Inadequately secured cookies can serve as **vulnerabilities exploited by cybercriminals** to gain access to and pilfer personal information.
    - Through **Cross-Site Request Forgery (CSRF)**, attackers can use cookies to **perform unauthorized actions on a user's behalf without their consent**.
  - **Cookie Bloat:** Over time, as users visit more websites, cookies accumulate on their devices, **consuming storage space** and potentially slowing down web browsing.
  - **Impact on User Experience:** Users may find these frequent consent requests **annoying and disruptive to their browsing experience**, as they have to interact with these dialogs repeatedly.

## Way Forward

- **Balancing Personalization and Privacy:** Users must be offered the ability to **customize their cookie preferences**, allowing them to opt in or out of specific categories of cookies.
  - They should be given personalized privacy dashboards, displaying detailed information about how their data is used (**in accordance with India's [Digital Personal Data Protection Act 2023](#)**), which cookies are active, and the associated benefits.
  - They should be allowed to **specify the expiration date of their consent for cookies**, giving them more control over how long their data is stored and used.
- **User Awareness:** To educate users, the website should provide clear and accessible information about cookies and **their importance for the website's functionality and performance**.

PDF Reference URL: <https://www.drishtias.com/printpdf/digital-world-of-cookies>