# BROWSER EXTENSION TO BLOCK TRACKERS
# INTERNSHIP PROJECT REPORT

**Name: Sowmy**

**Project Title: Browser Extension to Block Trackers**

**Technology: JavaScript, HTML, CSS, Manifest v3**

## 1. Introduction

Online tracking has become a major privacy concern in today's internet usage. Many websites load third-party scripts that track user behavior for analytics and advertisements. This project focuses on building a browser extension that blocks such tracking scripts to enhance user privacy.

## 2. Objective of the Project

The main objectives of this project are:

- To understand browser extension development
- To identify and block tracking domains
- To learn how browsers intercept network requests
- To build a simple and functional privacy tool

## 3. Tools & Technologies Used

- **Programming Languages:** JavaScript, HTML, CSS
- **Browser:** Google Chrome
- **Extension Standard:** Manifest Version 3
- **Chrome APIs Used:**
    - declarativeNetRequest
    - storage
    - action

## 4. Project Architecture

- **manifest.json** – Defines permissions, rules, and extension configuration
- **background.js** – Handles tracker blocking logic and counter updates
- **popup.html** – Displays blocked tracker count
- **popup.js** – Fetches and updates counter values
- **popup.css** – Styles the popup UI

**5. Working Methodology**

1. A predefined list of tracking domains is created
2. Chrome monitors outgoing network requests
3. Requests matching tracker domains are blocked automatically
4. Each blocked request increases a counter
5. The counter is stored using Chrome storage
6. The popup displays the total number of blocked trackers

This process runs silently in the background without affecting normal browsing.

**6. Testing & Results**

- Advertisement-related requests were blocked
- Console displayed ERR_BLOCKED_BY_CLIENT
- Popup correctly showed the number of blocked trackers
- Extension worked without affecting website usability

**7. Screenshots Included**

- Chrome Extensions page with extension enabled
- Developer Console showing blocked tracker requests
- Extension popup displaying blocked tracker count

**8. Security & Privacy Considerations**

- No personal data is collected
- No browsing history is stored
- All operations occur locally within the browser
- The extension improves user privacy by blocking trackers

**8. Learning Outcomes**

- How browser extensions function internally
- Basics of web privacy and tracking
- Practical usage of JavaScript in real-world security tools

**9. Conclusion**

This project successfully demonstrates a simple yet effective way to block online trackers using browser extensions. It helped in gaining hands-on experience in browser security and extension development.