

Experiment 9

Aim: To implement Service worker events like fetch, sync and push for E-commerce PWA.

Output:

Manifest.json

```
{
  "name": "MPL experiment 7",
  "short_name": "PWA",
  "start_url": "/index.html",
  "display": "standalone",
  "background_color": "#5900b3",
  "theme_color": "black",
  "scope": "/",
  "description": "This is a PWA tutorial.",
  "icons": [
    {
      "src": "/images1/ig.jpg",
      "sizes": "192x192",
      "type": "image/jpeg"
    },
    {
      "src": "/images1/edge.jpg",
      "sizes": "512x512",
      "type": "image/jpeg"
    }
  ]
}
```

Index.html (Script)

```
document.addEventListener("DOMContentLoaded", function () {
  // Register Service Worker after page load
  window.addEventListener("load", () => {
    registerSW();
  });

  async function registerSW() {
    if ("serviceWorker" in navigator) {
```

```

    try {
      await navigator.serviceWorker.register("/serviceworker.js");
      console.log("Service Worker Registered Successfully");
    } catch (error) {
      console.error("Service Worker Registration Failed:", error);
    }
  } else {
    console.warn("Service Worker is not supported in this browser.");
  }
}

// Place Order Button Logic
const placeOrderBtn = document.getElementById("place-order-btn");
if (placeOrderBtn) {
  placeOrderBtn.addEventListener("click", function () {
    if ("serviceWorker" in navigator && "SyncManager" in window) {
      const order = {
        id: Date.now(),
        items: [
          { name: "Product 1", price: 99.99, quantity: 1 },
          { name: "Product 2", price: 49.99, quantity: 2 }
        ],
        total: 199.97,
        timestamp: new Date().toISOString()
      };

      console.log("Order saved locally:", order);
      alert("Order placed! It will sync when you're online.");

      navigator.serviceWorker.ready.then(function (registration) {
        registration.sync.register("order-sync")
          .then(() => {
            console.log("Sync registered for order");
          })
          .catch(err => {
            console.error("Sync registration failed:", err);
          });
      });
    } else {
      alert("Background Sync not supported in your browser");
    }
  });
}

```

```

    } else {
        console.warn("Place Order button not found");
    }

    // Test Push Notification Logic
    const testPushBtn = document.getElementById("test-push-btn");
    if (testPushBtn) {
        testPushBtn.addEventListener("click", function () {
            if ("serviceWorker" in navigator) {
                navigator.serviceWorker.ready.then(function (registration) {
                    Notification.requestPermission().then(function (permission) {
                        if (permission === "granted") {
                            registration.active?.postMessage({
                                type: "push",
                                data: {
                                    method: "pushMessage",
                                    message: "Your order is ready for pickup!",
                                    url: "/orders"
                                }
                            });
                        } else {
                            alert("Notification permission denied");
                        }
                    });
                });
            } else {
                alert("Service Worker not supported in your browser");
            }
        });
    } else {
        console.warn("Test Push button not found");
    }
});

```

