



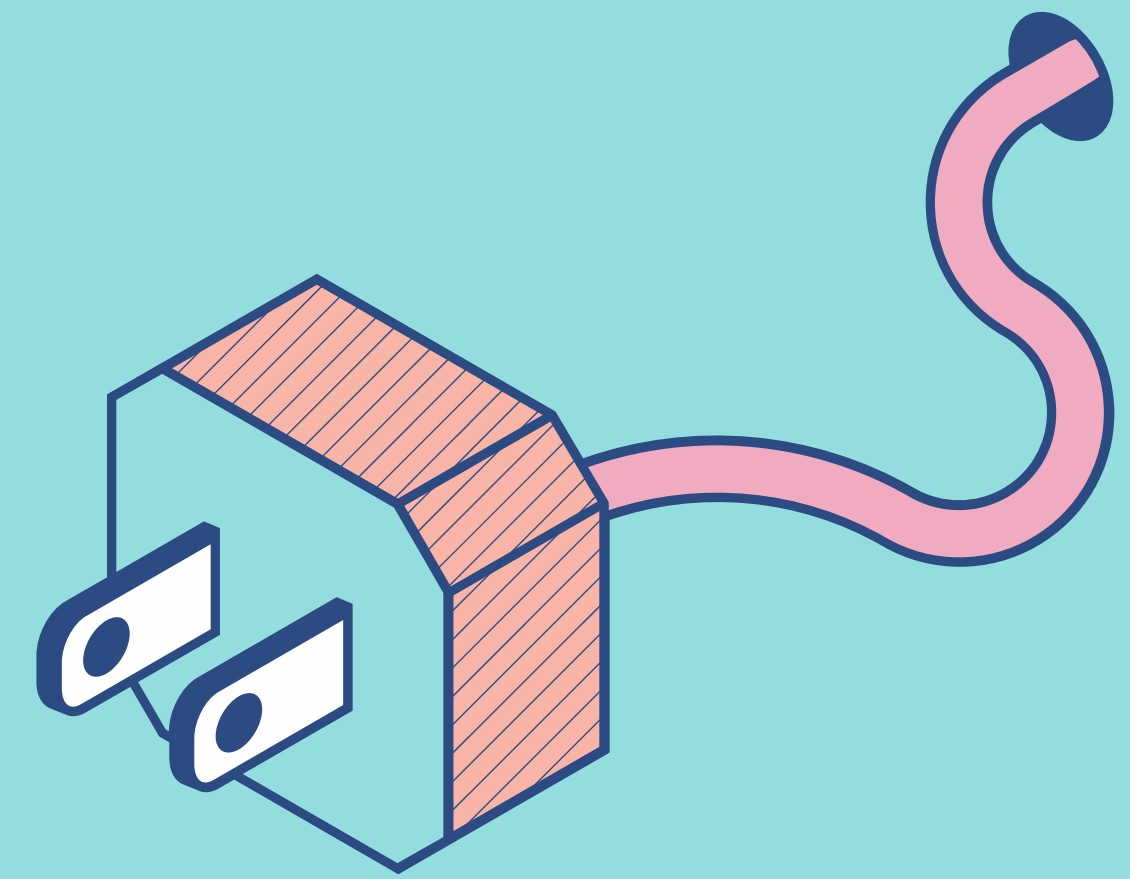
IIIC3548 - DAAW

## Tarea 4 - PWA

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# Progressive Web App

- Native-like apps
- Instalables desde el browser
- Capacidad Offline
- Push Notifications



- Fidelización
- Facilidad de acceso
- Mayor visibilidad

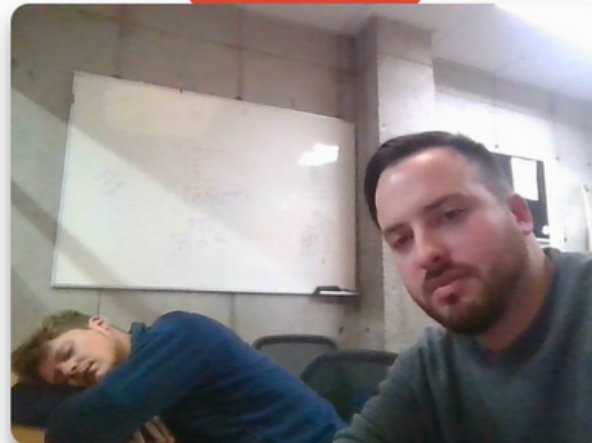
# Problema sugerido

## Photo-journal app

Dev'Foto

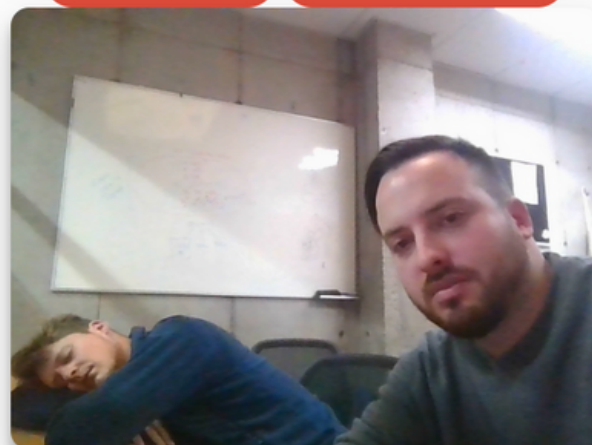
### My Pictures

Open Camera



Delete Photo

Download Photo



Delete Photo

Download Photo



### PWA

These checks validate the aspects of a Progressive Web App. [Learn more.](#)

#### INSTALLABLE

- Web app manifest and service worker meet the installability requirements

#### PWA OPTIMIZED

- Registers a service worker that controls page and `start_url`
- Configured for a custom splash screen
- Sets a theme color for the address bar.
- Content is sized correctly for the viewport
- Has a `<meta name="viewport">` tag with `width` or `initial-scale`
- Provides a valid `apple-touch-icon`
- Manifest has a maskable icon

# Solución

## 1. Service Worker

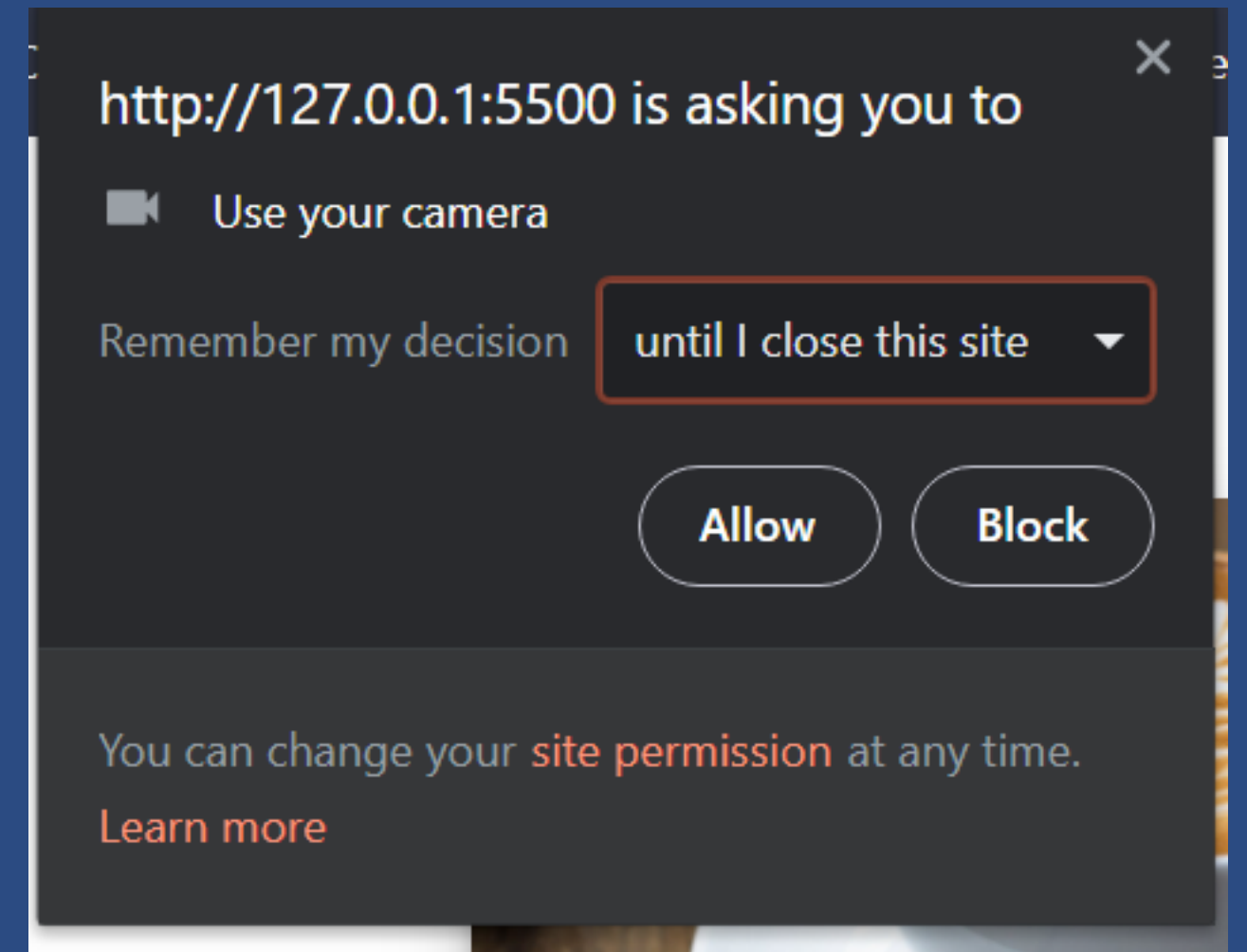
```
self.addEventListener("install", (installEvent) => {
  installEvent.waitUntil(
    caches.open(staticSite).then((cache) => {
      cache.addAll(assets);
    })
  );
});

self.addEventListener("fetch", (fetchEvent) => {
  fetchEvent.respondWith(
    caches.match(fetchEvent.request).then((res) => {
      return res || fetch(fetchEvent.request);
    })
  );
});
```

# Solución

## 2. Permisos

```
// GET CAMERA PERMISSION
if (pass) {
  navigator.mediaDevices
    .getUserMedia({ video: true })
    .then((stream) => {
      cam.init(1);
    })
    .catch((err) => {
      cam.err("Please attach a webcam and give app permission.");
      console.error(err);
    });
}
```



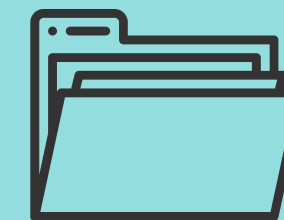
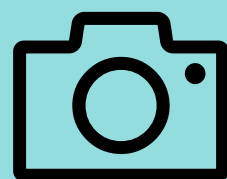
# Solución

## 3. Foto y guardado en Caché

```
snap: () => {
  clearTimeout(cam.snaptimer);
  cam.snapflash.classList.add("show");
  cam.snaptimer = setTimeout(() => {
    cam.snapflash.classList.remove("show");
    clearTimeout(cam.snaptimer);
  }, 100);

  // CAPTURE VIDEO FRAME TO CANVAS
  let canvas = document.createElement("canvas"),
      ctx = canvas.getContext("2d"),
      vWidth = cam.snapfeed.videoWidth,
      vHeight = cam.snapfeed.videoHeight;
  canvas.width = vWidth;
  canvas.height = vHeight;
  ctx.drawImage(cam.snapfeed, 0, 0, vWidth, vHeight);
```

```
// PICTURE TO CACHE STORAGE
canvas.toBlob((imgBlob) => {
  let url = URL.createObjectURL(imgBlob);
  fetch(url).then((res) => {
    caches.open(cam.cPics).then(async (cache) => {
      // GET NEXT NUMBER FOR SAVING PICTURE
      let i = 1;
      while (true) {
        let check = await cache.match("pic-" + i + ".png");
        if (check) {
          i++;
          continue;
        } else {
          break;
        }
      }
      // SAVE IMAGE INTO CACHE
      cache.put("pic-" + i + ".png", res);
      URL.revokeObjectURL(url);
    });
  });
});
```



# Solución

## 5. Galería

Descargar

```
// DOWNLOAD AN IMAGE
get: (pic) => {
  caches
    .match(pic)
    .then((res) => {
      return res.blob();
    })
    .then((imgBlob) => {
      let a = document.createElement("a"),
          url = URL.createObjectURL(imgBlob);
      a.href = url;
      a.download = "pic.png";
      a.click();
      a.remove();
      URL.revokeObjectURL(url);
    });
},
};
```

Eliminar

```
// DELETE AN IMAGE
del: (pic) => {
  if (confirm("Delete image?")) {
    caches.open(cam.cPics).then((cache) => {
      cache.delete(pic).then((res) => {
        gallery.list();
        cb.info("Image deleted");
      });
    });
  }
},
};
```

Obtener y mostrar

```
// DRAW IMAGES
wrap.innerHTML = "";
caches.open(cam.cPics).then((cache) => {
  cache.keys().then((keys) => {
    keys.forEach((req) => {
      let item = template.cloneNode(true);
      item.querySelector(".card--title").innerHTML = ""; //Cache cargado de captions
      item.querySelector(".img").src = req.url;

      item.querySelector(".del").onclick = () => {
        gallery.del(req.url);
      };
      item.querySelector(".get").onclick = () => {
        gallery.get(req.url);
      };
      wrap.appendChild(item);
    });
  });
});
```



# PWA Solución

DEMO



# Dificultades

## Manejo de Caché

- *Captions* editables asociadas a las fotos
  - Problemas en cómo guardar las *captions* asociadas a las fotos y editarlas/borrarlas.

# PWA Solución

DEMO

# Conclusiones

- Push + interacción de usuarios
  - Mejor posicionamiento en navegadores
    - Validación rápida del producto
- Viene a responder: ¿por qué instalar una app nativa?

