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<!DOCTYPE html>

teampsdprototype/index.Rmd at gh-pages · lijenn/teampsdprototype · GitHub

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<a href="#start-of-content" class="px-2 py-4 bg-blue text-white show-on-focus js-skip-to-content">Skip to content</a>  
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 <span class="progress-pjax-loader-bar top-0 left-0" style="width: 0%;"></span>  
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 <header class="Header-old header-logged-out js-details-container Details position-relative f4 py-2" role="banner">

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 <a class="mr-4" href="https://github.com/" aria-label="Homepage" data-ga-click="(Logged out) Header, go to homepage, icon:logo-wordmark">  
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 </a>  
  
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 </div>  
  
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 data-ga-click="Sign up, click to sign up for account, ref\_page:/&lt;user-name&gt;/&lt;repo-name&gt;/blob/show;ref\_cta:Sign up;ref\_loc:header logged out">  
 Sign&nbsp;up  
 </a>  
  
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 </button>  
 </div>  
</div>  
  
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 </button>  
 </div>  
  
 <nav class="mt-0 px-3 px-lg-0 mb-5 mb-lg-0" aria-label="Global">  
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 <li class="d-block d-lg-flex flex-lg-nowrap flex-lg-items-center border-bottom border-lg-bottom-0 mr-0 mr-lg-3 edge-item-fix position-relative flex-wrap flex-justify-between d-flex flex-items-center ">  
 <details class="HeaderMenu-details details-overlay details-reset width-full">  
 <summary class="HeaderMenu-summary HeaderMenu-link px-0 py-3 border-0 no-wrap d-block d-lg-inline-block">  
 Why GitHub?  
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 </svg>  
 </summary>  
 <div class="dropdown-menu flex-auto rounded-1 bg-white px-0 mt-0 pb-4 p-lg-4 position-relative position-lg-absolute left-0 left-lg-n4">  
 <a href="/features" class="py-2 lh-condensed-ultra d-block link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Features">Features <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a>  
 <ul class="list-style-none f5 pb-3">  
 <li class="edge-item-fix"><a href="/features/code-review/" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Code review">Code review</a></li>  
 <li class="edge-item-fix"><a href="/features/project-management/" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Project management">Project management</a></li>  
 <li class="edge-item-fix"><a href="/features/integrations" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Integrations">Integrations</a></li>  
 <li class="edge-item-fix"><a href="/features/actions" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Actions">Actions</a></li>  
 <li class="edge-item-fix"><a href="/features/packages" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to GitHub Packages">Packages</a></li>  
 <li class="edge-item-fix"><a href="/features/security" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Security">Security</a></li>  
 <li class="edge-item-fix"><a href="/features#team-management" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Team management">Team management</a></li>  
 <li class="edge-item-fix"><a href="/features#hosting" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Code hosting">Hosting</a></li>  
 <li class="edge-item-fix hide-xl"><a href="/mobile" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Mobile">Mobile</a></li>  
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 <ul class="list-style-none mb-0 border-lg-top pt-lg-3">  
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 <li class="edge-item-fix"><a href="/security" class="py-2 lh-condensed-ultra d-block no-underline link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Security">Security <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
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 <li class="border-bottom border-lg-bottom-0 mr-0 mr-lg-3">  
 <a href="/team" class="HeaderMenu-link no-underline py-3 d-block d-lg-inline-block" data-ga-click="(Logged out) Header, go to Team">Team</a>  
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 </svg>  
 </summary>  
  
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 </ul>  
  
 <h4 class="text-gray-light text-normal text-mono f5 mb-2 border-lg-top pt-lg-3">Learn &amp; contribute</h4>  
 <ul class="list-style-none mb-3">  
 <li class="edge-item-fix"><a href="/topics" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Topics">Topics</a></li>  
 <li class="edge-item-fix"><a href="/collections" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Collections">Collections</a></li>  
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 <li class="edge-item-fix"><a href="https://lab.github.com/" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Learning lab">Learning Lab</a></li>  
 <li class="edge-item-fix"><a href="https://opensource.guide" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Open source guides">Open source guides</a></li>  
 </ul>  
  
 <h4 class="text-gray-light text-normal text-mono f5 mb-2 border-lg-top pt-lg-3">Connect with others</h4>  
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 <li class="edge-item-fix"><a href="https://github.community" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Community forum">Community forum</a></li>  
 <li class="edge-item-fix"><a href="https://education.github.com" class="py-2 pb-0 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to GitHub Education">GitHub Education</a></li>  
 </ul>  
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 </li>  
  
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 <a href="/marketplace" class="HeaderMenu-link no-underline py-3 d-block d-lg-inline-block" data-ga-click="(Logged out) Header, go to Marketplace">Marketplace</a>  
 </li>  
  
 <li class="d-block d-lg-flex flex-lg-nowrap flex-lg-items-center border-bottom border-lg-bottom-0 mr-0 mr-lg-3 edge-item-fix position-relative flex-wrap flex-justify-between d-flex flex-items-center ">  
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 </svg>  
 </summary>  
  
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 </ul>  
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 name="q"  
 value=""  
 placeholder="Search"  
 data-unscoped-placeholder="Search GitHub"  
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 <input type="hidden" class="js-site-search-type-field" name="type" >  
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 <div class="Box position-absolute overflow-hidden d-none jump-to-suggestions js-jump-to-suggestions-container">

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 <svg height="16" width="16" class="octicon octicon-project flex-shrink-0 js-jump-to-octicon-project d-none" title="Project" aria-label="Project" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M1.75 0A1.75 1.75 0 000 1.75v12.5C0 15.216.784 16 1.75 16h12.5A1.75 1.75 0 0016 14.25V1.75A1.75 1.75 0 0014.25 0H1.75zM1.5 1.75a.25.25 0 01.25-.25h12.5a.25.25 0 01.25.25v12.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25V1.75zM11.75 3a.75.75 0 00-.75.75v7.5a.75.75 0 001.5 0v-7.5a.75.75 0 00-.75-.75zm-8.25.75a.75.75 0 011.5 0v5.5a.75.75 0 01-1.5 0v-5.5zM8 3a.75.75 0 00-.75.75v3.5a.75.75 0 001.5 0v-3.5A.75.75 0 008 3z"></path></svg>  
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</div>  
  
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 In this repository  
 </span>  
 <span class="js-jump-to-badge-search-text-global d-none" aria-label="in all of GitHub">  
 All GitHub  
 </span>  
 <span aria-hidden="true" class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>  
  
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 Jump to  
 <span class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>

No suggested jump to results

<svg height="16" width="16" class="octicon octicon-repo flex-shrink-0 js-jump-to-octicon-repo d-none" title="Repository" aria-label="Repository" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M2 2.5A2.5 2.5 0 014.5 0h8.75a.75.75 0 01.75.75v12.5a.75.75 0 01-.75.75h-2.5a.75.75 0 110-1.5h1.75v-2h-8a1 1 0 00-.714 1.7.75.75 0 01-1.072 1.05A2.495 2.495 0 012 11.5v-9zm10.5-1V9h-8c-.356 0-.694.074-1 .208V2.5a1 1 0 011-1h8zM5 12.25v3.25a.25.25 0 00.4.2l1.45-1.087a.25.25 0 01.3 0L8.6 15.7a.25.25 0 00.4-.2v-3.25a.25.25 0 00-.25-.25h-3.5a.25.25 0 00-.25.25z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-project flex-shrink-0 js-jump-to-octicon-project d-none" title="Project" aria-label="Project" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M1.75 0A1.75 1.75 0 000 1.75v12.5C0 15.216.784 16 1.75 16h12.5A1.75 1.75 0 0016 14.25V1.75A1.75 1.75 0 0014.25 0H1.75zM1.5 1.75a.25.25 0 01.25-.25h12.5a.25.25 0 01.25.25v12.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25V1.75zM11.75 3a.75.75 0 00-.75.75v7.5a.75.75 0 001.5 0v-7.5a.75.75 0 00-.75-.75zm-8.25.75a.75.75 0 011.5 0v5.5a.75.75 0 01-1.5 0v-5.5zM8 3a.75.75 0 00-.75.75v3.5a.75.75 0 001.5 0v-3.5A.75.75 0 008 3z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-search flex-shrink-0 js-jump-to-octicon-search d-none" title="Search" aria-label="Search" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M11.5 7a4.499 4.499 0 11-8.998 0A4.499 4.499 0 0111.5 7zm-.82 4.74a6 6 0 111.06-1.06l3.04 3.04a.75.75 0 11-1.06 1.06l-3.04-3.04z"></path></svg>  
</div>  
  
<img class="avatar mr-2 flex-shrink-0 js-jump-to-suggestion-avatar d-none" alt="" aria-label="Team" src="" width="28" height="28">  
  
<div class="jump-to-suggestion-name js-jump-to-suggestion-name flex-auto overflow-hidden text-left no-wrap css-truncate css-truncate-target">  
</div>  
  
<div class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none js-jump-to-badge-search">  
 <span class="js-jump-to-badge-search-text-default d-none" aria-label="in this repository">  
 In this repository  
 </span>  
 <span class="js-jump-to-badge-search-text-global d-none" aria-label="in all of GitHub">  
 All GitHub  
 </span>  
 <span aria-hidden="true" class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>  
  
<div aria-hidden="true" class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none d-on-nav-focus js-jump-to-badge-jump">  
 Jump to  
 <span class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>

<svg height="16" width="16" class="octicon octicon-repo flex-shrink-0 js-jump-to-octicon-repo d-none" title="Repository" aria-label="Repository" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M2 2.5A2.5 2.5 0 014.5 0h8.75a.75.75 0 01.75.75v12.5a.75.75 0 01-.75.75h-2.5a.75.75 0 110-1.5h1.75v-2h-8a1 1 0 00-.714 1.7.75.75 0 01-1.072 1.05A2.495 2.495 0 012 11.5v-9zm10.5-1V9h-8c-.356 0-.694.074-1 .208V2.5a1 1 0 011-1h8zM5 12.25v3.25a.25.25 0 00.4.2l1.45-1.087a.25.25 0 01.3 0L8.6 15.7a.25.25 0 00.4-.2v-3.25a.25.25 0 00-.25-.25h-3.5a.25.25 0 00-.25.25z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-project flex-shrink-0 js-jump-to-octicon-project d-none" title="Project" aria-label="Project" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M1.75 0A1.75 1.75 0 000 1.75v12.5C0 15.216.784 16 1.75 16h12.5A1.75 1.75 0 0016 14.25V1.75A1.75 1.75 0 0014.25 0H1.75zM1.5 1.75a.25.25 0 01.25-.25h12.5a.25.25 0 01.25.25v12.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25V1.75zM11.75 3a.75.75 0 00-.75.75v7.5a.75.75 0 001.5 0v-7.5a.75.75 0 00-.75-.75zm-8.25.75a.75.75 0 011.5 0v5.5a.75.75 0 01-1.5 0v-5.5zM8 3a.75.75 0 00-.75.75v3.5a.75.75 0 001.5 0v-3.5A.75.75 0 008 3z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-search flex-shrink-0 js-jump-to-octicon-search d-none" title="Search" aria-label="Search" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M11.5 7a4.499 4.499 0 11-8.998 0A4.499 4.499 0 0111.5 7zm-.82 4.74a6 6 0 111.06-1.06l3.04 3.04a.75.75 0 11-1.06 1.06l-3.04-3.04z"></path></svg>  
</div>  
  
<img class="avatar mr-2 flex-shrink-0 js-jump-to-suggestion-avatar d-none" alt="" aria-label="Team" src="" width="28" height="28">  
  
<div class="jump-to-suggestion-name js-jump-to-suggestion-name flex-auto overflow-hidden text-left no-wrap css-truncate css-truncate-target">  
</div>  
  
<div class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none js-jump-to-badge-search">  
 <span class="js-jump-to-badge-search-text-default d-none" aria-label="in this repository">  
 In this repository  
 </span>  
 <span class="js-jump-to-badge-search-text-global d-none" aria-label="in all of GitHub">  
 All GitHub  
 </span>  
 <span aria-hidden="true" class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>  
  
<div aria-hidden="true" class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none d-on-nav-focus js-jump-to-badge-jump">  
 Jump to  
 <span class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>

</div>  
 </label>

</div>  
  
 <a href="/login?return\_to=%2Flijenn%2Fteampsdprototype%2Fblob%2Fgh-pages%2Findex.Rmd"  
 class="HeaderMenu-link no-underline mr-3"  
 data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;site header menu&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/index.Rmd&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="2eb61bb10b9665b2c7d100edbc8848c492cadcbf5c995ee17a3cfabca252c808"  
 data-ga-click="(Logged out) Header, clicked Sign in, text:sign-in">  
 Sign&nbsp;in  
 </a>  
 <a href="/join?ref\_cta=Sign+up&amp;ref\_loc=header+logged+out&amp;ref\_page=%2F%3Cuser-name%3E%2F%3Crepo-name%3E%2Fblob%2Fshow&amp;source=header-repo&amp;source\_repo=lijenn%2Fteampsdprototype"  
 class="HeaderMenu-link d-inline-block no-underline border border-gray-dark rounded-1 px-2 py-1"  
 data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;site header menu&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/index.Rmd&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="2eb61bb10b9665b2c7d100edbc8848c492cadcbf5c995ee17a3cfabca252c808"  
 data-ga-click="Sign up, click to sign up for account, ref\_page:/&lt;user-name&gt;/&lt;repo-name&gt;/blob/show;ref\_cta:Sign up;ref\_loc:header logged out">  
 Sign&nbsp;up  
 </a>  
 </div>  
</div>

<button class="flash-close js-flash-close" type="button" aria-label="Dismiss this message">  
 <svg class="octicon octicon-x" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M3.72 3.72a.75.75 0 011.06 0L8 6.94l3.22-3.22a.75.75 0 111.06 1.06L9.06 8l3.22 3.22a.75.75 0 11-1.06 1.06L8 9.06l-3.22 3.22a.75.75 0 01-1.06-1.06L6.94 8 3.72 4.78a.75.75 0 010-1.06z"></path></svg>  
</button>  
  
 <div class="js-flash-template-message"></div>

<div itemscope itemtype="http://schema.org/SoftwareSourceCode" class="">  
<main >

<div class="d-flex mb-3 px-3 px-md-4 px-lg-5">  
  
 <div class="flex-auto min-width-0 width-fit mr-3">  
 <h1 class=" d-flex flex-wrap flex-items-center break-word f3 text-normal">  
<svg class="octicon octicon-repo-forked text-gray" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M5 3.25a.75.75 0 11-1.5 0 .75.75 0 011.5 0zm0 2.122a2.25 2.25 0 10-1.5 0v.878A2.25 2.25 0 005.75 8.5h1.5v2.128a2.251 2.251 0 101.5 0V8.5h1.5a2.25 2.25 0 002.25-2.25v-.878a2.25 2.25 0 10-1.5 0v.878a.75.75 0 01-.75.75h-4.5A.75.75 0 015 6.25v-.878zm3.75 7.378a.75.75 0 11-1.5 0 .75.75 0 011.5 0zm3-8.75a.75.75 0 100-1.5.75.75 0 000 1.5z"></path></svg>

lijenn / teampsdprototype

forked from lzim/teampsd

</div>  
  
 <ul class="pagehead-actions flex-shrink-0 d-none d-md-inline" style="padding: 2px 0;">

Watch 0

Star 0

Fork 21

Code

Issues 0

Pull requests 1

Actions

Projects 0

Security

Insights

<details class="details-overlay details-reset position-relative">

<svg class="octicon octicon-kebab-horizontal" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path d="M8 9a1.5 1.5 0 100-3 1.5 1.5 0 000 3zM1.5 9a1.5 1.5 0 100-3 1.5 1.5 0 000 3zm13 0a1.5 1.5 0 100-3 1.5 1.5 0 000 3z"></path></svg>  
 <span class="sr-only">More</span>  
 </div>

<ul>  
 <li data-menu-item="code-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/tree/gh-pages" href="/lijenn/teampsdprototype/tree/gh-pages">  
 Code

<li data-menu-item="issues-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/issues" href="/lijenn/teampsdprototype/issues">  
 Issues

<li data-menu-item="pull-requests-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/pulls" href="/lijenn/teampsdprototype/pulls">  
 Pull requests

<li data-menu-item="actions-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/actions" href="/lijenn/teampsdprototype/actions">  
 Actions

<li data-menu-item="projects-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/projects" href="/lijenn/teampsdprototype/projects">  
 Projects

<li data-menu-item="security-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/security" href="/lijenn/teampsdprototype/security">  
 Security

<li data-menu-item="insights-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/pulse" href="/lijenn/teampsdprototype/pulse">  
 Insights

</ul>

<a class="d-none js-permalink-shortcut" data-hotkey="y" href="/lijenn/teampsdprototype/blob/c5a23fb5eb8c43770c31eae03830b26bb7beb932/index.Rmd">Permalink</a>  
  
<!-- blob contrib key: blob\_contributors:v22:2f0c85325afc5182349a09f21677cd31 -->  
 <signup-prompt class="signup-prompt-bg rounded-1" data-prompt="signup" hidden>  
<div class="signup-prompt p-4 text-center mb-4 rounded-1">  
 <div class="position-relative">  
 <button  
 type="button"  
 class="position-absolute top-0 right-0 btn-link link-gray"  
 data-action="click:signup-prompt#dismiss"  
 data-ga-click="(Logged out) Sign up prompt, clicked Dismiss, text:dismiss"  
 >  
 Dismiss  
 </button>  
 <h3 class="pt-2">Join GitHub today</h3>  
 <p class="col-6 mx-auto">GitHub is home to over 50 million developers working together to host and review code, manage projects, and build software together.</p>  
 <a class="btn btn-primary" data-ga-click="(Logged out) Sign up prompt, clicked Sign up, text:sign-up" data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;files signup prompt&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/index.Rmd&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="696b04df21e876b720311dacc4c219a194fc6c04ddafcb292b811f8784b3c718" href="/join?source=prompt-blob-show&amp;source\_repo=lijenn%2Fteampsdprototype">Sign up</a>  
 </div>  
</div>

<div class="d-flex flex-items-start flex-shrink-0 pb-3 flex-wrap flex-md-nowrap flex-justify-between flex-md-justify-start">

gh-pages

<include-fragment class="SelectMenu-loading" aria-label="Menu is loading">  
 <svg class="octicon octicon-octoface anim-pulse" height="32" viewBox="0 0 16 16" version="1.1" width="32" aria-hidden="true"><path fill-rule="evenodd" d="M14.7 5.34c.13-.32.55-1.59-.13-3.31 0 0-1.05-.33-3.44 1.3-1-.28-2.07-.32-3.13-.32s-2.13.04-3.13.32c-2.39-1.64-3.44-1.3-3.44-1.3-.68 1.72-.26 2.99-.13 3.31C.49 6.21 0 7.33 0 8.69 0 13.84 3.33 15 7.98 15S16 13.84 16 8.69c0-1.36-.49-2.48-1.3-3.35zM8 14.02c-3.3 0-5.98-.15-5.98-3.35 0-.76.38-1.48 1.02-2.07 1.07-.98 2.9-.46 4.96-.46 2.07 0 3.88-.52 4.96.46.65.59 1.02 1.3 1.02 2.07 0 3.19-2.68 3.35-5.98 3.35zM5.49 9.01c-.66 0-1.2.8-1.2 1.78s.54 1.79 1.2 1.79c.66 0 1.2-.8 1.2-1.79s-.54-1.78-1.2-1.78zm5.02 0c-.66 0-1.2.79-1.2 1.78s.54 1.79 1.2 1.79c.66 0 1.2-.8 1.2-1.79s-.53-1.78-1.2-1.78z"></path></svg>  
 </include-fragment>  
</div>

<h2 id="blob-path" class="breadcrumb flex-auto min-width-0 text-normal mx-0 mx-md-3 width-full width-md-auto flex-order-1 flex-md-order-none mt-3 mt-md-0">  
 <span class="js-repo-root text-bold"><span class="js-path-segment d-inline-block wb-break-all"><a data-pjax="true" href="/lijenn/teampsdprototype/tree/gh-pages"><span>teampsdprototype</span></a></span></span><span class="separator">/</span><strong class="final-path">index.Rmd</strong>  
 </h2>  
 <a href="/lijenn/teampsdprototype/find/gh-pages"  
 class="js-pjax-capture-input btn mr-2 d-none d-md-block"  
 data-pjax  
 data-hotkey="t">  
 Go to file  
 </a>  
  
 <details class="details-overlay details-reset position-relative" id="blob-more-options-details">

Go to file T

Go to line L

Copy path

<include-fragment src="/lijenn/teampsdprototype/contributors/gh-pages/index.Rmd" class="commit-loader">  
 <div class="Box-header Box-header--blue d-flex flex-items-center">  
 <div class="Skeleton avatar avatar-user flex-shrink-0 ml-n1 mr-n1 mt-n1 mb-n1" style="width:24px;height:24px;"></div>  
 <div class="Skeleton Skeleton--text col-5 ml-2">&nbsp;</div>  
 </div>  
  
 <div class="Box-body d-flex flex-items-center" >  
 <div class="Skeleton Skeleton--text col-1">&nbsp;</div>  
 <span class="text-red h6 loader-error">Cannot retrieve contributors at this time</span>  
 </div>

71 lines (61 sloc)  
 <span class="file-info-divider"></span>  
1.88 KB

<div class="BtnGroup">  
 <a class="btn btn-sm BtnGroup-item " href="/lijenn/teampsdprototype/raw/gh-pages/index.Rmd" id="raw-url" role="button">Raw</a>  
 <a class="btn js-update-url-with-hash btn-sm BtnGroup-item " href="/lijenn/teampsdprototype/blame/gh-pages/index.Rmd" data-hotkey="b" role="button">Blame</a>  
</div>  
  
<div>  
 <a class="btn-octicon tooltipped tooltipped-nw js-remove-unless-platform"  
 data-platforms="windows,mac"  
 href="https://desktop.github.com"  
 aria-label="Open this file in GitHub Desktop"  
 data-ga-click="Repository, open with desktop">  
 <svg class="octicon octicon-device-desktop" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M1.75 2.5h12.5a.25.25 0 01.25.25v7.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25v-7.5a.25.25 0 01.25-.25zM14.25 1H1.75A1.75 1.75 0 000 2.75v7.5C0 11.216.784 12 1.75 12h3.727c-.1 1.041-.52 1.872-1.292 2.757A.75.75 0 004.75 16h6.5a.75.75 0 00.565-1.243c-.772-.885-1.193-1.716-1.292-2.757h3.727A1.75 1.75 0 0016 10.25v-7.5A1.75 1.75 0 0014.25 1zM9.018 12H6.982a5.72 5.72 0 01-.765 2.5h3.566a5.72 5.72 0 01-.765-2.5z"></path></svg>  
 </a>  
  
 <button type="button" class="btn-octicon disabled tooltipped tooltipped-nw"  
 aria-label="You must be signed in to make or propose changes">  
 <svg class="octicon octicon-pencil" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M11.013 1.427a1.75 1.75 0 012.474 0l1.086 1.086a1.75 1.75 0 010 2.474l-8.61 8.61c-.21.21-.47.364-.756.445l-3.251.93a.75.75 0 01-.927-.928l.929-3.25a1.75 1.75 0 01.445-.758l8.61-8.61zm1.414 1.06a.25.25 0 00-.354 0L10.811 3.75l1.439 1.44 1.263-1.263a.25.25 0 000-.354l-1.086-1.086zM11.189 6.25L9.75 4.81l-6.286 6.287a.25.25 0 00-.064.108l-.558 1.953 1.953-.558a.249.249 0 00.108-.064l6.286-6.286z"></path></svg>  
 </button>  
 <button type="button" class="btn-octicon btn-octicon-danger disabled tooltipped tooltipped-nw"  
 aria-label="You must be signed in to make or propose changes">  
 <svg class="octicon octicon-trashcan" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M6.5 1.75a.25.25 0 01.25-.25h2.5a.25.25 0 01.25.25V3h-3V1.75zm4.5 0V3h2.25a.75.75 0 010 1.5H2.75a.75.75 0 010-1.5H5V1.75C5 .784 5.784 0 6.75 0h2.5C10.216 0 11 .784 11 1.75zM4.496 6.675a.75.75 0 10-1.492.15l.66 6.6A1.75 1.75 0 005.405 15h5.19c.9 0 1.652-.681 1.741-1.576l.66-6.6a.75.75 0 00-1.492-.149l-.66 6.6a.25.25 0 01-.249.225h-5.19a.25.25 0 01-.249-.225l-.66-6.6z"></path></svg>  
 </button>  
</div>

—

title: “Team PSD Manual”

author: “Team PSD”

date: “2020-08-05”

link-citations: yes

preview: yes

site: bookdown::bookdown\_site

description: This is the Team PSD one stop shop.

—

# Team PSD Manual

Welcome to Team PSD's manual for all things related to resources and guides!

**Click within chapters and subsections** or use the **built-in search feature** to search throughout the manual for key terms.

{r include=FALSE}</span><span class="pl-s1"></span></td> </tr> <tr> <td id="L18" class="blob-num js-line-number" data-line-number="18"></td> <td id="LC18" class="blob-code blob-code-inner js-file-line"><span class="pl-s1">library(<span class="pl-smi">HelpersMG</span>)</span></td> </tr> <tr> <td id="L19" class="blob-num js-line-number" data-line-number="19"></td> <td id="LC19" class="blob-code blob-code-inner js-file-line"><span class="pl-s1">library(<span class="pl-smi">readr</span>)</span></td> </tr> <tr> <td id="L20" class="blob-num js-line-number" data-line-number="20"></td> <td id="LC20" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-c"><span class="pl-c">#</span>Parse table of contents for documents to be downloaded</span></span></td> </tr> <tr> <td id="L21" class="blob-num js-line-number" data-line-number="21"></td> <td id="LC21" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-en">read\_markdown</span> <span class="pl-k">&lt;-</span> <span class="pl-k">function</span>(<span class="pl-smi">file</span>, <span class="pl-v">trim\_ws</span> <span class="pl-k">=</span> <span class="pl-c1">TRUE</span>, <span class="pl-k">...</span>){</span></td> </tr> <tr> <td id="L22" class="blob-num js-line-number" data-line-number="22"></td> <td id="LC22" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-k">if</span> (length(<span class="pl-smi">file</span>) <span class="pl-k">&gt;</span> <span class="pl-c1">1</span>) {</span></td> </tr> <tr> <td id="L23" class="blob-num js-line-number" data-line-number="23"></td> <td id="LC23" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-smi">lines</span> <span class="pl-k">&lt;-</span> <span class="pl-smi">file</span></span></td> </tr> <tr> <td id="L24" class="blob-num js-line-number" data-line-number="24"></td> <td id="LC24" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> } <span class="pl-k">else</span> {</span></td> </tr> <tr> <td id="L25" class="blob-num js-line-number" data-line-number="25"></td> <td id="LC25" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-smi">lines</span> <span class="pl-k">&lt;-</span> <span class="pl-e">readr</span><span class="pl-k">::</span>read\_lines(<span class="pl-smi">file</span>)</span></td> </tr> <tr> <td id="L26" class="blob-num js-line-number" data-line-number="26"></td> <td id="LC26" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> }</span></td> </tr> <tr> <td id="L27" class="blob-num js-line-number" data-line-number="27"></td> <td id="LC27" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-smi">lines</span> <span class="pl-k">&lt;-</span> <span class="pl-smi">lines</span>[<span class="pl-k">!</span>grepl(<span class="pl-s"><span class="pl-pds">&#39;</span>^[[:blank:]+-=:\_|]\*$<span class="pl-pds">&#39;</span></span>, <span class="pl-smi">lines</span>)]</span></td> </tr> <tr> <td id="L28" class="blob-num js-line-number" data-line-number="28"></td> <td id="LC28" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-smi">lines</span> <span class="pl-k">&lt;-</span> gsub(<span class="pl-s"><span class="pl-pds">&#39;</span>(^<span class="pl-cce">\\</span>s\*?<span class="pl-cce">\\</span>|)|(<span class="pl-cce">\\</span>|<span class="pl-cce">\\</span>s\*?$)<span class="pl-pds">&#39;</span></span>, <span class="pl-s"><span class="pl-pds">&#39;</span><span class="pl-pds">&#39;</span></span>, <span class="pl-smi">lines</span>)</span></td> </tr> <tr> <td id="L29" class="blob-num js-line-number" data-line-number="29"></td> <td id="LC29" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-e">readr</span><span class="pl-k">::</span>read\_delim(paste(<span class="pl-smi">lines</span>, <span class="pl-v">collapse</span> <span class="pl-k">=</span> <span class="pl-s"><span class="pl-pds">&#39;</span><span class="pl-cce">\n</span><span class="pl-pds">&#39;</span></span>), <span class="pl-v">delim</span> <span class="pl-k">=</span> <span class="pl-s"><span class="pl-pds">&#39;</span>|<span class="pl-pds">&#39;</span></span>, </span></td> </tr> <tr> <td id="L30" class="blob-num js-line-number" data-line-number="30"></td> <td id="LC30" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-v">trim\_ws</span> <span class="pl-k">=</span> <span class="pl-smi">trim\_ws</span>, <span class="pl-k">...</span>)</span></td> </tr> <tr> <td id="L31" class="blob-num js-line-number" data-line-number="31"></td> <td id="LC31" class="blob-code blob-code-inner js-file-line"><span class="pl-s1">}</span></td> </tr> <tr> <td id="L32" class="blob-num js-line-number" data-line-number="32"></td> <td id="LC32" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"></span></td> </tr> <tr> <td id="L33" class="blob-num js-line-number" data-line-number="33"></td> <td id="LC33" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-c"><span class="pl-c">#</span> Parse URLs out of String and preserve order from table</span></span></td> </tr> <tr> <td id="L34" class="blob-num js-line-number" data-line-number="34"></td> <td id="LC34" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-en">parse\_urls</span> <span class="pl-k">&lt;-</span> <span class="pl-k">function</span>(<span class="pl-smi">table</span>){</span></td> </tr> <tr> <td id="L35" class="blob-num js-line-number" data-line-number="35"></td> <td id="LC35" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-smi">x</span> <span class="pl-k">&lt;-</span> vector()</span></td> </tr> <tr> <td id="L36" class="blob-num js-line-number" data-line-number="36"></td> <td id="LC36" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-k">for</span>(<span class="pl-smi">i</span> <span class="pl-k">in</span> <span class="pl-c1">1</span><span class="pl-k">:</span>ncol(<span class="pl-smi">table</span>)){</span></td> </tr> <tr> <td id="L37" class="blob-num js-line-number" data-line-number="37"></td> <td id="LC37" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-k">for</span>(<span class="pl-smi">j</span> <span class="pl-k">in</span> <span class="pl-c1">1</span><span class="pl-k">:</span>nrow(<span class="pl-smi">table</span>)){</span></td> </tr> <tr> <td id="L38" class="blob-num js-line-number" data-line-number="38"></td> <td id="LC38" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-v">url</span> <span class="pl-k">=</span> gsub(<span class="pl-s"><span class="pl-pds">&quot;</span>(?&lt;=<span class="pl-cce">\\</span>()[^()]\*(?=<span class="pl-cce">\\</span>))(\*SKIP)(\*F)|.<span class="pl-pds">&quot;</span></span>, <span class="pl-s"><span class="pl-pds">&#39;</span><span class="pl-pds">&#39;</span></span>, <span class="pl-smi">table</span>[[<span class="pl-smi">j</span>,<span class="pl-smi">i</span>]], <span class="pl-v">perl</span><span class="pl-k">=</span><span class="pl-c1">T</span>)</span></td> </tr> <tr> <td id="L39" class="blob-num js-line-number" data-line-number="39"></td> <td id="LC39" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-k">if</span>(grepl(<span class="pl-s"><span class="pl-pds">&quot;</span><span class="pl-cce">\\</span>.\*md<span class="pl-pds">&quot;</span></span>,<span class="pl-smi">url</span>)){</span></td> </tr> <tr> <td id="L40" class="blob-num js-line-number" data-line-number="40"></td> <td id="LC40" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-smi">x</span> <span class="pl-k">&lt;-</span> c(<span class="pl-smi">x</span>,<span class="pl-smi">url</span>)</span></td> </tr> <tr> <td id="L41" class="blob-num js-line-number" data-line-number="41"></td> <td id="LC41" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> }</span></td> </tr> <tr> <td id="L42" class="blob-num js-line-number" data-line-number="42"></td> <td id="LC42" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> }</span></td> </tr> <tr> <td id="L43" class="blob-num js-line-number" data-line-number="43"></td> <td id="LC43" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> }</span></td> </tr> <tr> <td id="L44" class="blob-num js-line-number" data-line-number="44"></td> <td id="LC44" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-k">return</span>(<span class="pl-smi">x</span>)</span></td> </tr> <tr> <td id="L45" class="blob-num js-line-number" data-line-number="45"></td> <td id="LC45" class="blob-code blob-code-inner js-file-line"><span class="pl-s1">}</span></td> </tr> <tr> <td id="L46" class="blob-num js-line-number" data-line-number="46"></td> <td id="LC46" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"></span></td> </tr> <tr> <td id="L47" class="blob-num js-line-number" data-line-number="47"></td> <td id="LC47" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-c"><span class="pl-c">#</span>remove yaml from markdown</span></span></td> </tr> <tr> <td id="L48" class="blob-num js-line-number" data-line-number="48"></td> <td id="LC48" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-en">parse\_yaml</span> <span class="pl-k">&lt;-</span> <span class="pl-k">function</span>(<span class="pl-smi">document</span>){</span></td> </tr> <tr> <td id="L49" class="blob-num js-line-number" data-line-number="49"></td> <td id="LC49" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-k">if</span>(grepl(<span class="pl-s"><span class="pl-pds">&quot;</span><span class="pl-cce">\\</span>.\*md<span class="pl-pds">&quot;</span></span>, <span class="pl-smi">document</span>) <span class="pl-k">&amp;&amp;</span> <span class="pl-k">!</span>grepl(<span class="pl-s"><span class="pl-pds">&quot;</span><span class="pl-cce">\\</span>index<span class="pl-cce">\\</span>.Rmd<span class="pl-pds">&quot;</span></span>, <span class="pl-smi">document</span>)){</span></td> </tr> <tr> <td id="L50" class="blob-num js-line-number" data-line-number="50"></td> <td id="LC50" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-smi">md</span> <span class="pl-k">&lt;-</span> read\_file(<span class="pl-smi">document</span>)</span></td> </tr> <tr> <td id="L51" class="blob-num js-line-number" data-line-number="51"></td> <td id="LC51" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-c"><span class="pl-c">#</span>remove everything before the H1</span></span></td> </tr> <tr> <td id="L52" class="blob-num js-line-number" data-line-number="52"></td> <td id="LC52" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> <span class="pl-smi">md\_no\_yaml</span> <span class="pl-k">&lt;-</span> sub(<span class="pl-s"><span class="pl-pds">&quot;</span>.\*?#<span class="pl-pds">&quot;</span></span>,<span class="pl-s"><span class="pl-pds">&quot;</span>#<span class="pl-pds">&quot;</span></span>, <span class="pl-v">x</span> <span class="pl-k">=</span> <span class="pl-smi">md</span>)</span></td> </tr> <tr> <td id="L53" class="blob-num js-line-number" data-line-number="53"></td> <td id="LC53" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> writeLines(<span class="pl-smi">md\_no\_yaml</span>, <span class="pl-v">con</span><span class="pl-k">=</span><span class="pl-smi">document</span>, <span class="pl-v">useBytes</span><span class="pl-k">=</span><span class="pl-c1">T</span>)</span></td> </tr> <tr> <td id="L54" class="blob-num js-line-number" data-line-number="54"></td> <td id="LC54" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> print(<span class="pl-smi">md\_no\_yaml</span>)</span></td> </tr> <tr> <td id="L55" class="blob-num js-line-number" data-line-number="55"></td> <td id="LC55" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> }</span></td> </tr> <tr> <td id="L56" class="blob-num js-line-number" data-line-number="56"></td> <td id="LC56" class="blob-code blob-code-inner js-file-line"><span class="pl-s1">}</span></td> </tr> <tr> <td id="L57" class="blob-num js-line-number" data-line-number="57"></td> <td id="LC57" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"></span></td> </tr> <tr> <td id="L58" class="blob-num js-line-number" data-line-number="58"></td> <td id="LC58" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-c"><span class="pl-c">#</span> Point file name to the md file containing your table of contents.</span></span></td> </tr> <tr> <td id="L59" class="blob-num js-line-number" data-line-number="59"></td> <td id="LC59" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-v">table\_of\_contents</span> <span class="pl-k">=</span> read\_markdown(<span class="pl-s"><span class="pl-pds">&quot;</span>table\_of\_contents.Rmd<span class="pl-pds">&quot;</span></span>)</span></td> </tr> <tr> <td id="L60" class="blob-num js-line-number" data-line-number="60"></td> <td id="LC60" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"></span></td> </tr> <tr> <td id="L61" class="blob-num js-line-number" data-line-number="61"></td> <td id="LC61" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-v">markdown\_files</span> <span class="pl-k">=</span> parse\_urls(<span class="pl-smi">table\_of\_contents</span>)</span></td> </tr> <tr> <td id="L62" class="blob-num js-line-number" data-line-number="62"></td> <td id="LC62" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-k">for</span>(<span class="pl-smi">url</span> <span class="pl-k">in</span> <span class="pl-smi">markdown\_files</span>){</span></td> </tr> <tr> <td id="L63" class="blob-num js-line-number" data-line-number="63"></td> <td id="LC63" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> wget(<span class="pl-smi">url</span>)</span></td> </tr> <tr> <td id="L64" class="blob-num js-line-number" data-line-number="64"></td> <td id="LC64" class="blob-code blob-code-inner js-file-line"><span class="pl-s1">}</span></td> </tr> <tr> <td id="L65" class="blob-num js-line-number" data-line-number="65"></td> <td id="LC65" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"></span></td> </tr> <tr> <td id="L66" class="blob-num js-line-number" data-line-number="66"></td> <td id="LC66" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-c"><span class="pl-c">#</span>remove yaml from files</span></span></td> </tr> <tr> <td id="L67" class="blob-num js-line-number" data-line-number="67"></td> <td id="LC67" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"><span class="pl-k">for</span>(<span class="pl-smi">file</span> <span class="pl-k">in</span> list.files(getwd())){</span></td> </tr> <tr> <td id="L68" class="blob-num js-line-number" data-line-number="68"></td> <td id="LC68" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"> parse\_yaml(<span class="pl-smi">file</span>)</span></td> </tr> <tr> <td id="L69" class="blob-num js-line-number" data-line-number="69"></td> <td id="LC69" class="blob-code blob-code-inner js-file-line"><span class="pl-s1">}</span></td> </tr> <tr> <td id="L70" class="blob-num js-line-number" data-line-number="70"></td> <td id="LC70" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"></span></td> </tr> <tr> <td id="L71" class="blob-num js-line-number" data-line-number="71"></td> <td id="LC71" class="blob-code blob-code-inner js-file-line"><span class="pl-s1"></span><span class="pl-c1">

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Reference in new issue

Go

<ul class="list-style-none d-flex flex-wrap col-12 col-lg-5 flex-justify-center flex-lg-justify-between mb-2 mb-lg-0">  
 <li class="mr-3 mr-lg-0">&copy; 2020 GitHub, Inc.</li>  
 <li class="mr-3 mr-lg-0"><a data-ga-click="Footer, go to terms, text:terms" href="https://github.com/site/terms">Terms</a></li>  
 <li class="mr-3 mr-lg-0"><a data-ga-click="Footer, go to privacy, text:privacy" href="https://github.com/site/privacy">Privacy</a></li>  
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 <li><a data-ga-click="Footer, go to help, text:help" href="https://docs.github.com">Help</a></li>  
  
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<a aria-label="Homepage" title="GitHub" class="footer-octicon d-none d-lg-block mx-lg-4" href="https://github.com">  
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<svg class="octicon octicon-alert" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M8.22 1.754a.25.25 0 00-.44 0L1.698 13.132a.25.25 0 00.22.368h12.164a.25.25 0 00.22-.368L8.22 1.754zm-1.763-.707c.659-1.234 2.427-1.234 3.086 0l6.082 11.378A1.75 1.75 0 0114.082 15H1.918a1.75 1.75 0 01-1.543-2.575L6.457 1.047zM9 11a1 1 0 11-2 0 1 1 0 012 0zm-.25-5.25a.75.75 0 00-1.5 0v2.5a.75.75 0 001.5 0v-2.5z"></path></svg>  
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</button>  
You can’t perform that action at this time.

<svg class="octicon octicon-alert" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M8.22 1.754a.25.25 0 00-.44 0L1.698 13.132a.25.25 0 00.22.368h12.164a.25.25 0 00.22-.368L8.22 1.754zm-1.763-.707c.659-1.234 2.427-1.234 3.086 0l6.082 11.378A1.75 1.75 0 0114.082 15H1.918a1.75 1.75 0 01-1.543-2.575L6.457 1.047zM9 11a1 1 0 11-2 0 1 1 0 012 0zm-.25-5.25a.75.75 0 00-1.5 0v2.5a.75.75 0 001.5 0v-2.5z"></path></svg>  
<span class="js-stale-session-flash-signed-in" hidden>You signed in with another tab or window. <a href="">Reload</a> to refresh your session.</span>  
<span class="js-stale-session-flash-signed-out" hidden>You signed out in another tab or window. <a href="">Reload</a> to refresh your session.</span>

# Values & Principles

## Scientific Values

**Team PSD Scientific Values** guide additional **Participatory** and **Open Science** principles: - **Participatory Research** encourages us to **co-create our scientific research**. Therefore… - We **share decisions**, which requires a high level of **documentation.** - We seek greater **equity** among partners in how collaborate, which requires **responsive pivots** with new stakeholder inputs. - We strive use **transparent** and **accessible** processes and platforms, and develop **transparent, accessible resources**.

## Guiding Principles

### Open-Source, Transparent, Reproducible

We value an open-source, transparent & reproducible workflow.

* Most of our work is public-facing with the exception of any items that include Protected Health Information (PHI) or Personally Identifiable Information (PII). All of our public materials are free to download and use. We want our insights and resources to benefit the larger community.
* We use R, a free open-source coding language and a specific file naming convention to ensure all of our matierals are machine & human readable (all lower case, no spaces, with dates as yyyy\_mm\_dd i.e. teampsd\_guiding\_principles\_2020\_01\_01).
* Use email for any private discussions. Host any private files in password-protected locations or in folders behind the VA firewall. When in doubt, ask an HQ member or err on the side of caution.
* Make sure your work and accompanying documentation allows other team members or scientists in the field to reproduce and understand your work without further questions.

### High Visibility

Our work has high visibility.

* Keep in mind we work under the federal government of the United States for the Veterans Health Administration (VHA), the largest integrated healthcare system in the country. Everything we produce is a reflection of the VHA.
* We work with a wide range of nationally-distributed partners both internal and external to VA, including very important and high-level stakeholders. Double check the role and responsibility of people you are communicating with before you do.
* With these partners, we work in a participatory learning manner and iterate based on feedback from the field to ensure our work is responsive to ongoing changes.

### Team Time

Any time saved is team time.

* Ask questions early and often to prevent escalating issues down the road. Refer to existing resources (cheatsheets, checklists, etc.) as well for clarification.
* Double check all work before handing it off to the next team member to reduce rework.
* Think through dependencies across the team and partners and prioritize work based on the most recent information you have.
* Manage workflow asynchronously (via GitHub) and only schedule meetings when absolutely necessary.

### Communication

Use effective communication (across all types of communication including emails, GitHub, Lucid, etc.).

* Assume everyone you’re communicating with is smarter than you and cares more than you and is busier than you.
* Use clear and concise language, with formatting (bold, underline, bullets, etc) to emphasize the main decisions or issues making sure to include the “Who” “What” and “When”.
* Always include the full context and details necessary to make an informed decision (and make sure you are up to speed on the context and details before responding).
* Use complete sentences as much as possible and write in the active voice for clarity
* Often the team looks back to previous records of meetings, GitHub discussions, etc. to remember and track decisions that were already made or if they missed the meetings where an issue may have been discussed. As such, we always need to keep the most accurate record possible to reduce rework and provide clarity.
* Use emojis or humor (as appropriate) to help maintain a positive and collegial vibe. Turn on your webcam as much as possible for the face-to-face interaction.

### Active Listening

We use active listening skills to ensure understanding and accurate tracking.

* We work daily with team members and partners that are experts in their respective fields, and it is easy to lose track of a complex discussion.
* We’ve found that reflecting-back requests and decisions in your own words has been the best method to reduce miscommunication and to keep track of all of our decisions or issues accurately. If you ever need help while scribing, always “tap” someone else on the team for assistance.
* Ask for clarification and slow down if necessary.

#### Active listening is a stance.

Taking the stance that misunderstanding is the norm and using skills appropriate to that reality.

1. General skills: Reflecting content for efficiency and interpersonal rapport (i.e., avoiding rework and frustration)

* “When in doubt, check it out” - It’s the listener’s job to help the speaker understand what they are getting or what they missed.
* Let the speaker know when you’re falling behind. Stop them before the conversation exceeds your understanding.
* Use the same precise language/vocabulary, esp. Team PSD or *MTL* terms with specific meanings.

1. “Chunking” components of what someone said (e.g., listen for the “and” when someone is speaking)

* Listen for the main points.
* This is a key skill to keep up with complex ideas in the moment (You don’t want to get bogged down on point 1 and miss point 2).

1. Reflection of feeling - listen for the feeling words and reflect them exactly.

* Using the exact feeling word you heard is the safest way to ensure the person feels heard.
* Don’t reflect “frustration” when someone is expressing “disappointment” or “stress.”
* You can use these for non-verbals too.
* If you hear a feeling, it’s best to address it in your reflection.

1. Synthesize two person’s ideas - or just two ideas (or more)

* e.g. “on the one hand, I hear Anthony saying…” and “on the other hand, I hear Stacey saying…”
* Synthesis brings the ideas together. It is not just active listening both ideas as separate ideas.

1. Summarize - used when it’s time to wrap up, and move on, and a lot of ideas have been said.

* This is not the time to bring up new points. If you do have something to add, say it first.
* It’s best to end with a summary of the key points of consensus and the key take aways of what to do next.

1. After you reflect, add to what the person is saying (a key to improv is “yes, and…” - don’t reject ideas, just try to understand first and then build on the ideas).

* Forward momentum comes from making sure you understand the person and add your own contribution.
* Listening is about being present to understand; you do not have to agree with what a person is saying.
* Before you even get to agreement/disagreement, make sure you have a shared understanding first.
* KEY IDEA: Really attend to make sure you understand. Do NOT think about your response when you should be listening.

#### Things to look out for when listening:

Know thyself: You are the only one who knows whether it’s time to multi-task, focus, scribe/document as a form of listening, or whether typing would be a distraction.

Repetition cycle: If the speaker you’re listening to keeps repeating something, your first move should be to assume that you’re missing something and ask what it is.

Your own feelings: If you’re starting to feel frustrated, it’s a key sign that you should use active listening to get back on the same page.

## Project Management Principles [flowmap needed]

* **NOTE: Team PSD Scientific Values guide *how* and *why* we synthesize the approaches below**

**Team PSD integrates Waterfall** principles because: - We are a **research team** that cannot deviate in quality, scope, timeline or cost from our thoroughly developed and vetted **research plan** - Therefore, there are several **well-defined scientific requirements** where change cannot occur - unless the PI and co-I senior scientists advise an operational definition or implementation detail is within the scope of the federally funded and registered, scientifically peer-reviewed, and VA ORD and Stanford IRB reviewed procedures.

**Team PSD integrates Agile** principles because: - Our research team’s method is a an implementation of **participatory system dynamics** in a national production environment. - These methods **historically have iterated in-person** locally. - Our innovation is local priorities, local data and local insights at national scale, made possible using **online platforms** and **virtual processes**.

**Team PSD integrates Waterfall and Agile** principles because: - We are using a funded **a priori research design** (Waterfall) to **study** an **implementation science** (Agile) problem. - Producing generalizable knowledge requires implementation scientists to **follow and report publicly** progress completing a **rigorous, replicable plan** (Waterfall) - However, the context is not a tightly controlled laboratory, rather we are **working with operational partners** to **implement our innovation** the dynamic context of real world healthcare operations (Agile)

**Team PSD integrates Lean** principles because: - Team PSD ***processes*** are assessed for continuous improvement (kaizen/muda elimination) - Team PSD ***communication*** is designed to reduce rework (muda/waste) - Team PSD encourages ***minimum viable products*** to find and synthesize team and partner expertise (just-in-time) - Team PSD ***platforms*** are designed to increase visual production controls (kanban/signboard; andon alerts) - Note: VA uses Lean as a primary approach to healthcare quality improvement.

**Team PSD integrates Scrum** principles because: - We need to be able keep work produced by our t**ransdisciplinary research team** on the same page with our **cross-functional team**. - Therefore, we use **sprints** (epics/milestones)so that the **team priorities** can be aligned/re-aligned efficiently. - We also use **workgroup leads** (scrum masters), **workgroups** (owners) and **workgroup** meetings to benefit from the efficiency of **divvying up/delegating**, while also identifying **dependencies** and remove **blocks**. - We use **GitHub/ZenHub** and **daily huddles** to assign, scope, prioritize, manage and review our capacity, requirements, estimates - this includes **Project Kanbans, Issue Cards, Pipelines & Reporting**.

**Team PSD Pain points we are working to better address**: - Need &&tight collaboration without unnecessary overhead,\*\* so **culture of participation** is maintained - Need **rapid iterations that prototype,** check early, and **synthesize input**from key stakeholders as efficiently as possible, so we aren’t pulled in wasteful directions or adding unnecessary **rework** - Need a **standard set of principles and processes,** so our **production platforms** are **stable at scale.**

**Continuous Collaborative Iteration Cycles (e.g., “DevOps”)** - SOP > Workgroup Meetings > Monthly Priorities > Requirements gathering standardization for features - Tools for team members to understand cross-functional “stakes” efficiently - “Continuous integration” to avoid “merge conflicts” - *Quotes are meant to clarify that we have this problem at a communication and conceptual level, not just a code level.* **We need the code level next…because…** - Ideally…**testing,** **deploying** and **documenting** would be increasingly automated. - REALLY need continuous documentation and training.

# Team PSD 2.0 Monthly Process

As Team PSD continues to grow, our workflow alongside team values in order to better support the needs of our team, just like how we developed [*Modeling to Learn*](https://mtl.how) to scale nationally in the Veterans Health Administration.

The **participatory learning** principles we scaled in *Modeling to Learn* are:

* equitable access to resources
* mutual learning
* shared decision-making

**Team PSD 2.0** is about becoming more scalable due to continuous integration, deployment and documention.

* We aim for a completely free, accessible, transparent and reproducible workflow (aka **“open science”**).
* **Our mission** to improve how healthcare quality improvement decisions are made enlists diverse team members and partners.
* We want to **empower** effective contributions from all potential stakeholders.

The Team PSD 2.0 Monthly Process is based on the design thinking principles of **user experience**, which attemps to account for a **person’s needs**, **pain points**, **goals**, and **emotional experience** when using a **product/service** and/or going through a **process** and **system**.

**Team PSD 2.0 Process for monthly sprints/epics:**

**Week 1:** Gather user-centered hypotheses

**Week 2:** Clarify user assumptions w/ Minimum Viable Product (MVP) test

**Week 3:** Review results of user persona testing of your MVP Prototype (with concurrent video and retrospective verbal)

**Week 4:** Review user persona artifacts and second story perspectives mindfully and empathically to discover new understandings you might have missed or still need to learn

Our monthly **process for each monthly sprint/epic** is based on the **process for design thinking**:

## Week 1: Gather User Hypotheses

In week 1, we want to gather the user centered hypotheses of the user/user group that we want to help and design for either by meeting with them and/or referring to their user personas.

Hypotheses should consist of the user’s needs, pain points, and consider the background and context of the user.

*Week 1 follows the* ***first phase of the process for design thinking*** *which involves the ability to* ***empathize*** *with the user’s current state of experience.*

1. **Empathize** - To gain an empathic understanding of the need or problem you are trying to solve in terms of people, **processes** that set aside individual **assumptions** to get insight into the need.

* **What?** Details of what to do (what happened).
  + This is when we **analyze** observe and document details that relate to users.
* **How?** How the person does it (effort, etc.)
* **Why?** Motivations/purpose (test this out…)

**Exercises for assumptions** (remember: everything is a perspective):

1. **List assumptions**
2. **Ask**: How could this not be true?
3. **Ask**: What if we could do this twice as well in half the time?

**Example of a User Persona:**

## Week 2: Clarify User Assumptions w/ MVP test

In week 2, we want to narrow down the week 1 user centered hypotheses by clarifying assumptions based on those hypotheses.

Assumptions the designer has based on week 1 hypotheses should clarified to **define** only the most crucial and necessary needs and pain points that will be addressed **before prototyping a minimum viable product (MVP)**. This will prevent creating/designing for needs that **do not solve 80% of the user’s pain points with only 20% effort** being used in the development of the MVP and test and **quickly rule out MVPs** that do not respond to needs of the users in a **fast and cheap** manner.

*Week 2 follows the* ***2nd phase of the process for design thinking*** *which involves the ability to* ***define*** *with the user’s specific set of problems that needs to be immediately addressed.*

1. **Define the problem** - This is when we **synthesize** observations into holistic **point of view** (POV).

**Goal is to make linkages, so that we define the right problem to address.**

[Example POV: Busy, nationally distributed, cross-functional team of scientists has many partners, is about to hire more people, leads a national participatory system dynamics simulation learning program in, and is gaining increasing national and international interest in partnership HMW…]

2a. **A problem statement: Focuses on**

* **Specific peopleʼs needs** (not the technology or specs),
* **Value and insights for the project** (not the technical requirements), yet it is…
* …narrow enough to be **managed within our constraints**

**Exercises for definitions with how-why/why-how laddering** (a variant of **5 whys** principle):

1. Asking **“Why?”** Explores to understand **root causes** (abstract, more common across people)
2. …then **“How might we?”** to get to a **specific** problem/challenge we can solve (concrete)

**Part I - The HMW Brainstorm…HMW**

* use the efficiency of GitHub [good]
* remove the [bad] steep learning curve
* integrate with existing GH norms the best part [explore the opposite]
* remove reliance on training [question the assumption]
* go after adjectives [make it easy, instead of hard]
* use code instead of by hand [leverage unexpected resource]
* enable self-directed learning like “Googling” [analogy from need/context]
* attract help from Forio, MITRE, VA to solve this [shift POV against the challenge]
* get it up and running now [shift a status quo]
* divvy up chunks for each workgroup [break up POV]

**Part II**

1. “**Why** do we need to integrate our manuals, workflows and processes on GitHub to achieve Team PSD values? (if start with Why, phrase as a need and make it meaningful.”

Because…

1. “**How** do we use manuals, workflows and process on GitHub now?”

* [describe]
* **“Why?”**
* **“Why?”**

1. What what was most **surprising**?
2. What would we have **missed** if we hadnʼt asked why?

## Week 3: Review User Results of MVP

In week 3, we want to share our MVPs with the user to collect user feedback.

To collect feedback, users will be participating in 2 Think Aloud protocols: **Concurrent Screencast Video (no audio) and Retrospective Verbal.**

1. **A Concurrent Screencast Video Think Aloud** requires users to screencast themselves going through the MVP prototype, but without audio so they can focus soley on using the MVP.
2. **A Retrospective Verbal Think Aloud** occurs after the Concurrent Screencase Video Think Aloud in which users think about how they felt about the MVP, what went wrong, what went right, what was missing, etc and write it up afterwards.

These 2 Think Aloud protocols allows us to leverage both the pros and cons of a Concurrent and Retrospective Think Aloud in which:

* the Concurrent provides an undisturbed recording of the user going through the MVP.
* the Retrospective allows the users to verbalize their thoughts, emotions, and feelings about the MVP.

*Week 3 follows the* ***3rd and 4th phases of the process for design thinking*** *which involves the ability to* ***ideate*** *MVPs based on the needs and assumptions of the users and get user feedback on a* ***prototype*** *MVP that will solve 80% of the user’s pain points and needs with only 20% effort.*

1. **Ideate** - Expand the problem space by identifying and testing out elements that would circumvent problems.

* time-limit
* quantity over quality
* no distractions
* no bad ideas

1. **Prototype** - inexpensive, scaled down version with the **key features** to investigate the problem and solution. **Goal is to identify the best possible solution**.

* Solutions are investigated, accepted, improved, re-examined, rejected based on user-experiences.
* Should give much better sense sense of constraints and how users would behave, think, and feels when interaction with it.

### Create Screencast Video

#### Instructions

Make **user-persona Concurrent Think Aloud videos** testing Team PSD prototypes (aka MVPs: ‘minimum viable products’).

#### Context - *Why* this is critical for Team PSD 2.0 to scale?

* To scale Team PSD processes, we evaluate the **usability** and **user experience** of Team PSD prototypes.
  + **Passive Screen Video Observation**
    - Usability (quantitative MVP tests)
    - This test is the **concurrent** think aloud protocol to detect problems with MVP assumptions.
    - Prototype developers gain re-susable insights into the users (through the library).
    - Users don’t have to think about producing these scalable artifacts (just upload).
    - These files are named with this convention “date\_skill\_training\_user” e.g., “2020\_05\_13\_git\_ch1\_busy\_pi”
  + **Verbalization**
    - User-experience (qualitative MVP tests)
    - This test is the **retrospective** think aloud protocol to detect problems with MVP assumptions.
  + **Learning task performance.**
    - We need **distributed Team PSD users** to *learn at scale.*
    - All prototypes are teaching our learners a skill they need to contribute to the team.
    - As we upskill, we continuously integrate prototypes, which scales learning *and* improvement across Team PSD.

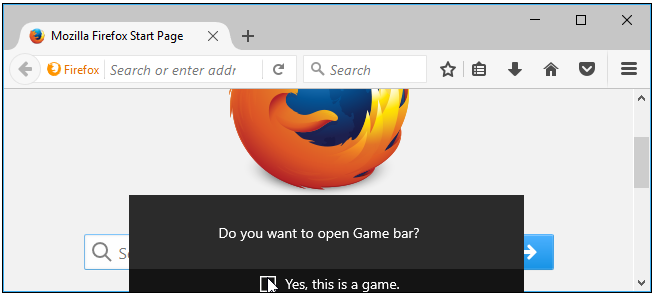
#### Record Screen (No Audio)

#### PC User (VA or Non-VA)

#### Non-VA, Windows 10 users only: Record screen using Game DVR

The Game DVR feature can capture any application’s window.

1. **Press Windows + G** in any application on Windows 10.
2. **Look for the Game Bar** that will appear.
3. **Select “Yes, this is a game”** even if the application isn’t a game.



**Reminder:** *Protect your privacy* and only include information that is relevant for Team PSD prototyping.

#### VA or Non-VA: Record screen using PowerPoint



Powerpoint can has a built-in ability to screencast your desktop and input the video onto a slide in blank powerpoint presentation.

You can save the video file separately afterwards.

Follow the guide [**here**](https://support.microsoft.com/en-us/office/record-your-screen-in-powerpoint-0b4c3f65-534c-4cf1-9c59-402b6e9d79d0#OfficeVersion=Newer_versions).

1. Follow **steps 1-6** under the header: **Record from your computer screen and embed the recording in PowerPoint.**
2. **VA Machine User**: Your PowerPoint Version on your VA machine will be able to screencast with the instructions in the guide above.
3. **Non-VA Machine User**: Be sure to check your PowerPoint versions as this only works in *PowerPoint for Microsoft 365, PowerPoint 2019, PowerPoint 2016, PowerPoint 2013.*

**Reminder:** *Protect your privacy* and only include information that is relevant for Team PSD prototyping.

#### Mac User (Usually Non-VA)

#### Record any window on your Mac.

1. **Press Shift-Command-5**. The *Onscreen Controls* will appear.
2. Once the *Onscreen Controls* appear, click on one of the buttons with the record circle in the bottom right (4th icon from the left - **Record Entire Screen** or 5th icon from the left - **Record Selected Portion**)
3. **Click the down arrow** under *Options*, located next to the record button.
4. Under *Microphone*, **select none** to turn off audio recording.
5. Under *Options* in the *Onscreen Controls,* **adjust the recording window,** setup a *Timer*, and where to *Save To* your recording. 
6. In the *Menu Bar*, **click the Stop Recording button** or **press Command-Control-Esc (Escape)** to stop recording.



**Reminder:** *Protect your privacy* and only include information that is relevant for Team PSD prototyping.

**Reference:** van den Haak, Maaike, De Jon, Menno, Schellens, & Peter Jan. (2003). Retrospective vs. concurrent think-aloud protocols: Testing the usability of an online library catalogue. *Behavior & Information Technology, 22.* <https://doi.org/10.1080/0044929031000>

### Upload Screencast Video

#### Instructions

**Post user persona Concurrent Think Aloud videos** testing Team PSD prototypes (aka MVPs: ‘minimum viable products’) to **YouTube.**

#### 1. Create a Google Account

If you don’t already have a gmail/Google account, **select this link** to create a Google account.

[https://accounts.google.com/SignUpWithoutGmail](https://accounts.google.com/signup/v2/webcreateaccount?flowName=GlifWebSignIn&flowEntry=SignUp&nogm=true)

* A Gmail is not required to sign up.
* This email is only used to login and will not be public.
* Uploaded user persona videos will be posted under the Brand Account **LZPhD**.

#### 2. Share Email with Brand Account Manager

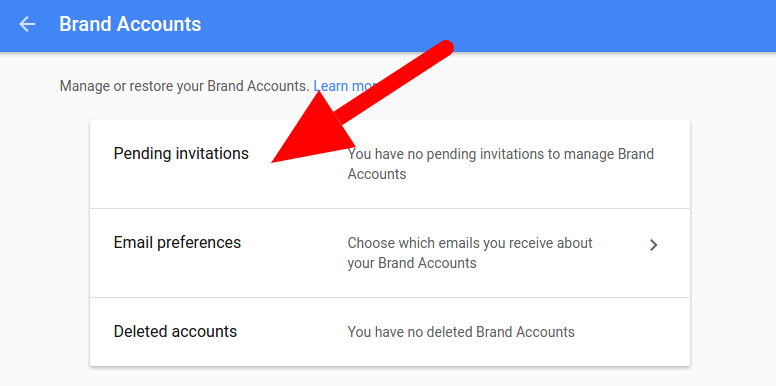
* **Share the email** associated with your Google account with a **brand account manager** to process an invitation.
* A **brand account manager** is any manager that already has access to the YouTube channel.
* **Communicate** through Microsoft Teams.

#### 3. Manage YouTube Invitation

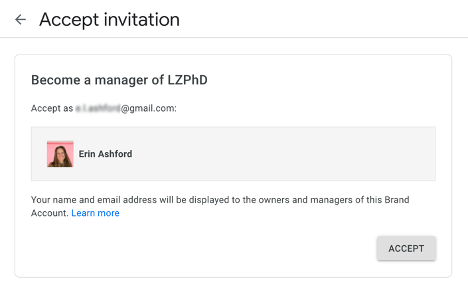
* **Login** to your Google account
* **Select** this link

<https://myaccount.google.com/brandaccounts>

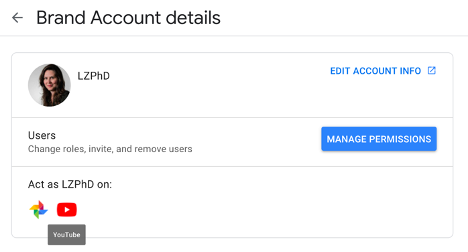
* **Click** Pending invitations.



* **Select** LZPhD.
* **Accept invitation**.



* **Scroll down**: “Act as LZPhD on”:
* **Select** the YouTube red icon.



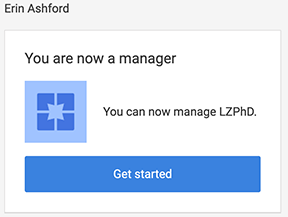
* **Navigate** to the inbox associated with your Google account.
* You will see a confirmation in your inbox that reads, “You are now a manager of LZPhD”.



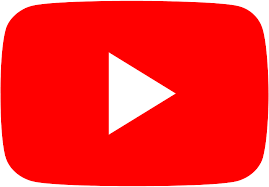
* **Select** the new email.
* **You are now a manager** Congratulations!

#### 4. Upload User Persona Video

* **Select** Get started.



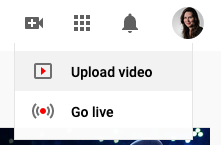
* **Select** the YouTube red icon.



* Your YouTube dashboard will open up.
* **Navigate to the top right** and **select** your circular profile pic.



* From the drop-down menu, **select switch accounts**.
* **Select** LZPhD.
* On the top right, **Select** the video camera + icon (Create).
* **Select** Upload video.



* Find the user persona video file you’d like to upload.

#### 5. Convention for Video Details During Upload

* Use this naming convention **“date\_skill\_training\_user”** ex: **“2020\_05\_13\_git\_ch1\_busy\_pi”**
* A description is not necessary at this time.
* No playlist.

**Audience**

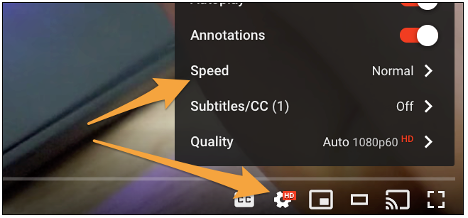
* **Select, Yes, it is made for kids**. This will remove any advertisements.
* **Click Next** advance to next screen
* **Click Next**, no video elements at this time.

**Visibility**

* **Select Unlisted** only people with the link can see it.
* **Click Save** and your video will continue processing.
* You can safely **logout of YouTube** when your **screencast is fully uploaded.**

#### 6. Speed Up or Slow Down YouTube Viewing

* While viewing your user persona video in YouTube, **click** the gear icon located on the bottom right.
* **Select** the “Speed” option.



* **Choose** a range of speeds.

## Week 4: Review Second Story Perspectives

In week 4, your **prototype and MVPs should be able to be fully incorporated into Team PSD’s workflow** as we **do NOT** want to spend time developing solutions that do not solve 80% of our team’s needs and utilizing only 20% effort in order to fail fast and fail cheap by quickly ruling out assumptions and solutions that do not work.

*Week 4 follows the* ***last phase of the process for design thinking*** *which involves the ability to* ***review tests*** *of your MVP and* ***reflect*** *on those tests that can help you even better mindfully and empathize with users, ultimately to further improve your skills for month’s design process.*

1. **Test** - Review tests your prototype with the user personas in question & look for 2nd story perspectives.

* Does the prototype address the personas needs and pain points?
* What could we have missed or ignored from the user?
* What worked well in the month and what did not?

### Reflect Second Stories

**Use these set of question to help think through Second Story Perspective Questions to reflect on the design process from the month:**

1. Do you see any places where moving forward independently could have been more aligned with the team or integrated better when you were done?
2. Could a dependency or root assumption have been caught any sooner for the benefit of the team?
3. Have you discovered a new empathic understanding of the situation from another users’ POV (point of view)?

# MS Teams

TeamPSD and the VA are both using [Microsoft Teams](https://www.microsoft.com/en-us/microsoft-365/microsoft-teams/download-app) as their main communication platform.

TeamPSD is currently using the **Free Version of Microsoft Teams** so the entire team can get used to it as the VA begins to roll it out system-wide between mid-July to early August.

## Quick Start Guide

To review the basics of Microsoft Teams, check out their [Quick Start Guide](https://www.chorus.co/media/2989/quickstart-guide-to-teams-chorus.pdf).

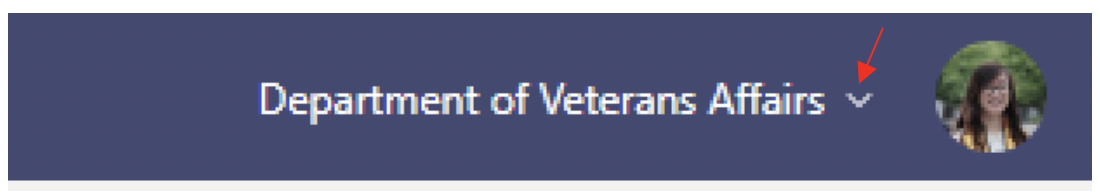
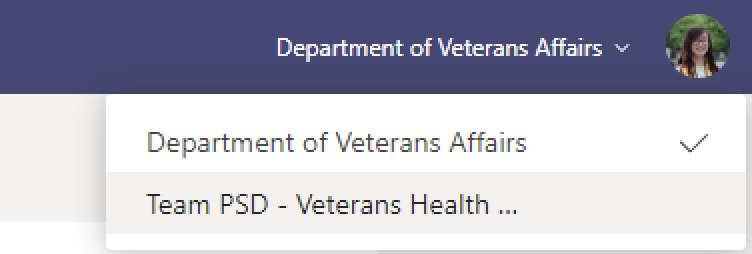
This guide will help you learn the basic user interface functions of Microsoft Teams (**Free version or VA**) such as:

* Signing In
* Manage your profile settings
* Choose/browse channels
* Start a meeting or call
* Start a new conversation thread
* Reply within a message/conversation thread
* @ Mention someone
* Start a 1:1 or small group chat
* Add/Share/Work with Files
* and more!

## Additional Tips/Functions

### Switch Organizations

To switch out of an organization:

1. Click on the **organization you are currently in**, located next your profile picture & name. 
2. To switch out of the organization, click on the **organization you want to switch into**. 

### Meet in a Channel

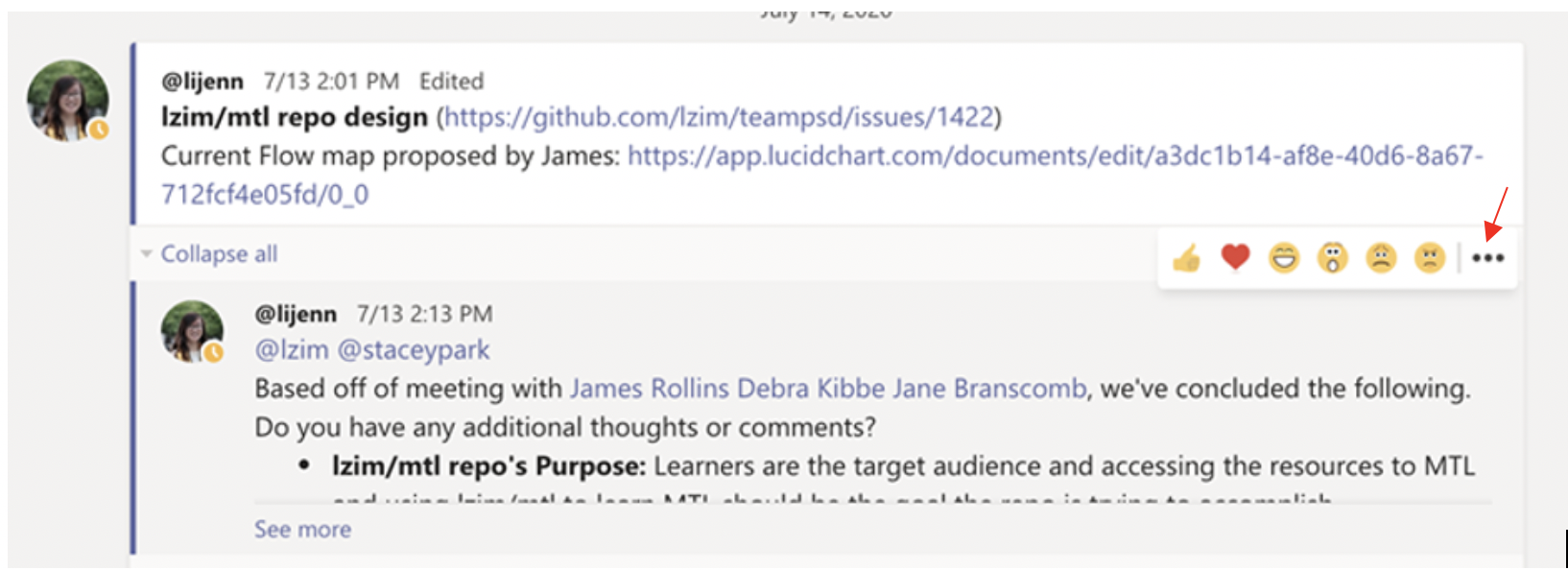
To know where a meeting call is being held in a channel:

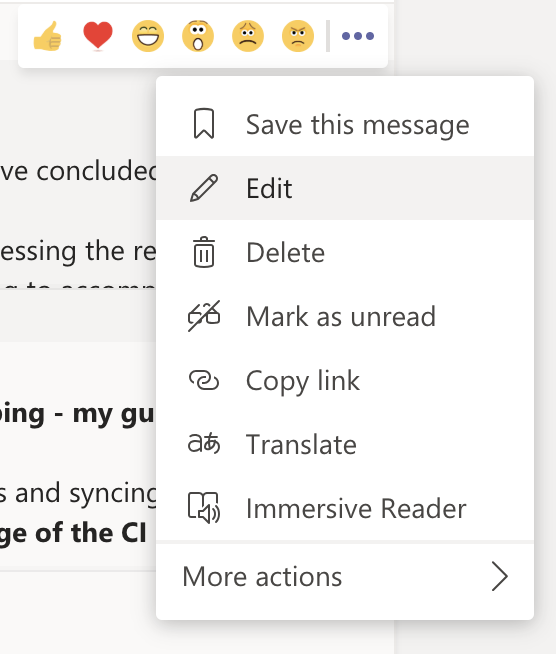
1. Look to see the **purple video icon** next to a **channel’s name**.

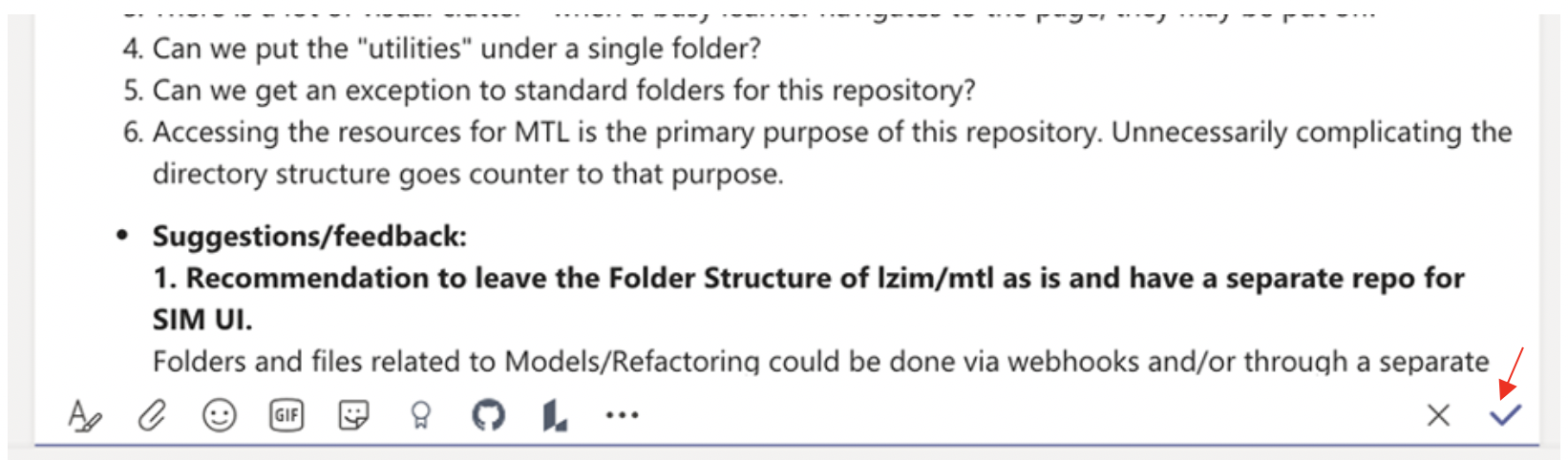


### Edit Message/Reply

To edit a message:

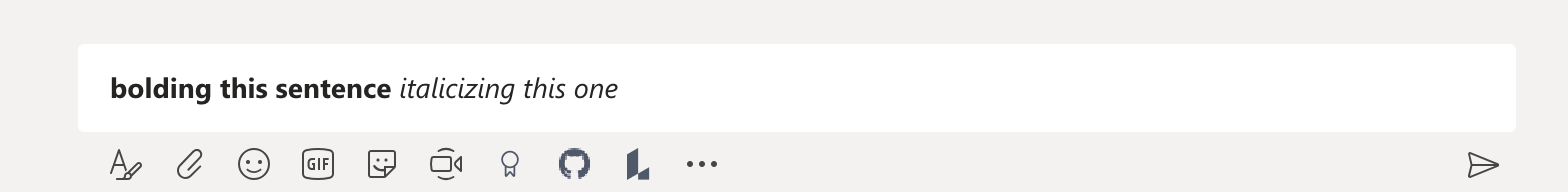
1. Drag your cursor over to an existing comment and **click on the 3 dots** next to the 6 “react” emojis. 
2. Select the **pencil icon Edit button**.



1. After finishing your edit, select the **check mark button** to publish or the **“x button”** to exit out of the draft. 

### Use Markdown

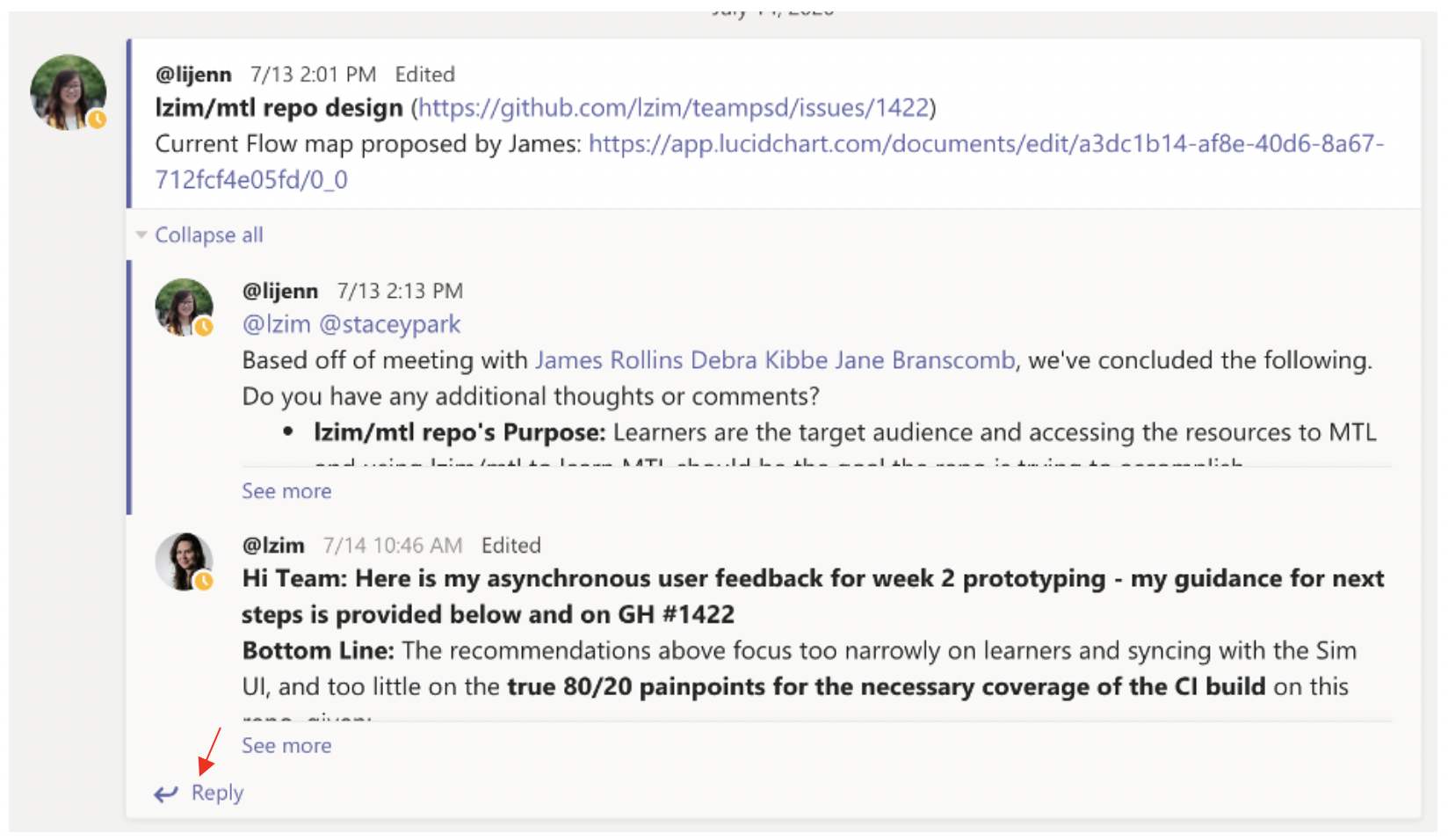
Teams is Markdown friendly!

1. Try using **basic markdown** such as bolding or italicizing text in a comment/reply. 

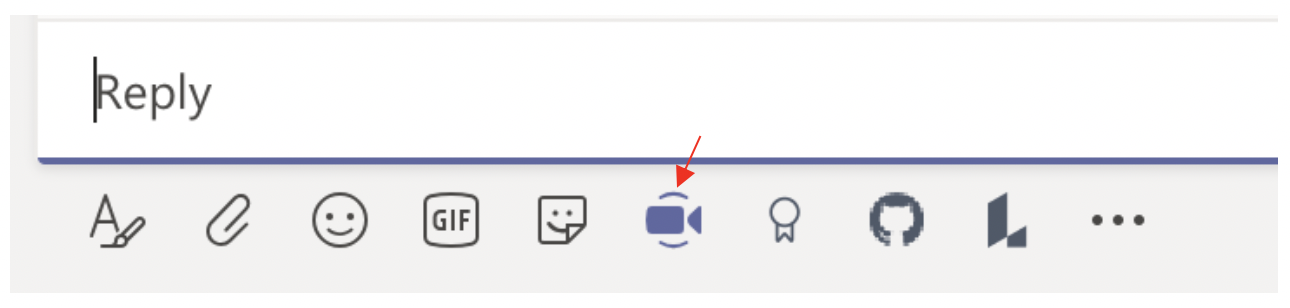
### Start a Call in a Thread

To start a meeting call within the same conversation thread to keep context:

1. In the conversation thread, click on the **reply button**.



1. Click on the **video icon button** to begin a call.



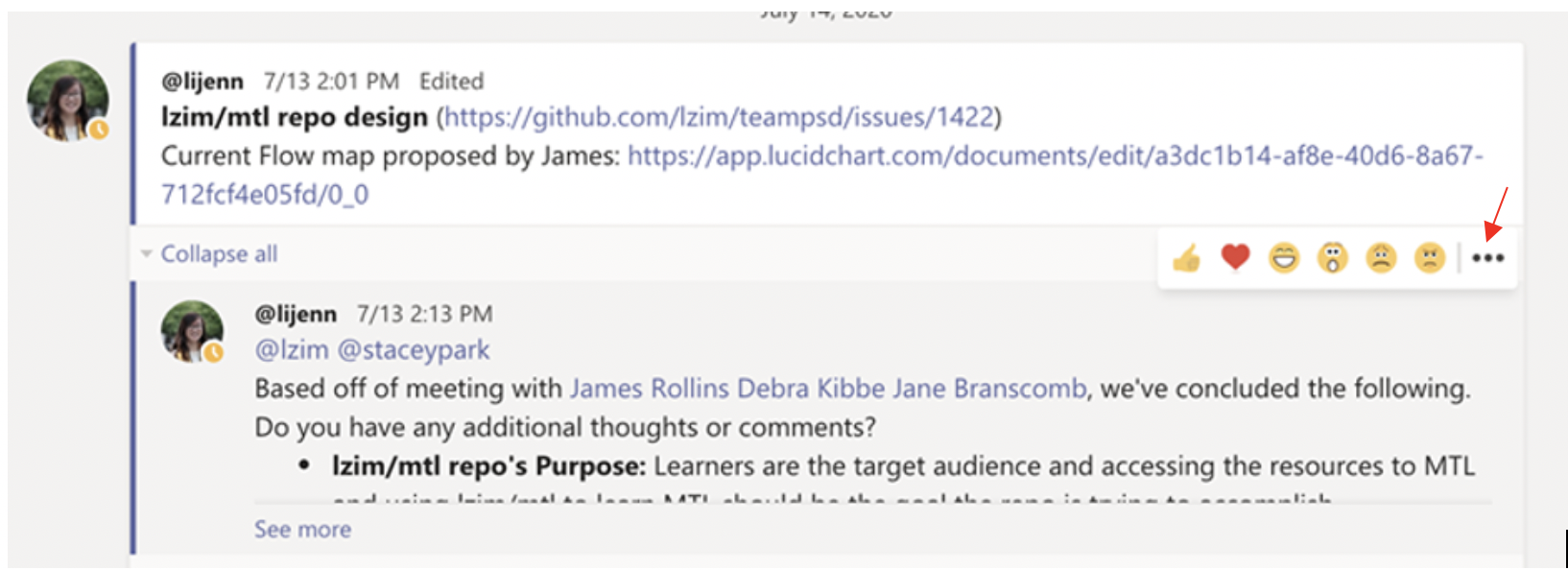
### “React” to a Comment

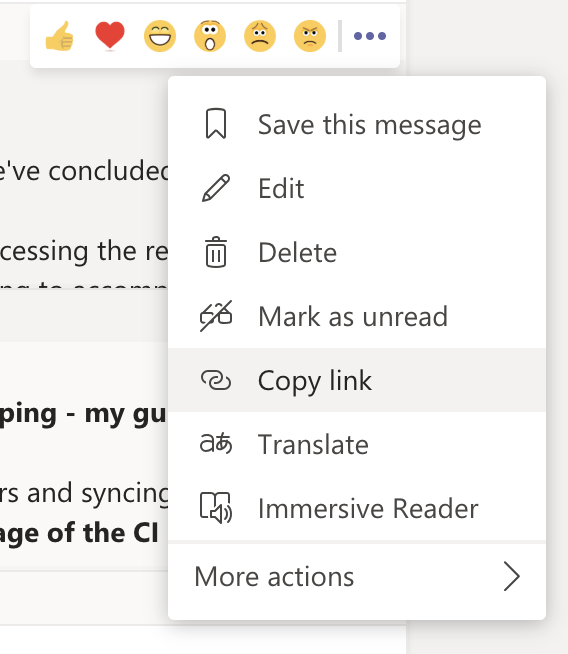
To “React” to a comment or reply to acknowledge it:

1. Drag your cursor over to an existing comment and **select 1 of the 6 emojis** to “react” to it. 

### Link a Comment/Discussion/File

To link to a specific thread or comment or file:

1. Drag your cursor over to an existing comment and **click on the 3 dots** next to the 6 “react” emojis. 
2. Click on **hyperlink icon copy link button** to copy the link to the location of that thread/comment/file.



#000000">

<a href="#start-of-content" class="px-2 py-4 bg-blue text-white show-on-focus js-skip-to-content">Skip to content</a>  
 <span class="Progress progress-pjax-loader position-fixed width-full js-pjax-loader-bar">  
 <span class="progress-pjax-loader-bar top-0 left-0" style="width: 0%;"></span>  
 </span>  
  
  
  
  
  
  
 <header class="Header-old header-logged-out js-details-container Details position-relative f4 py-2" role="banner">

<div class="d-flex flex-justify-between flex-items-center">  
 <a class="mr-4" href="https://github.com/" aria-label="Homepage" data-ga-click="(Logged out) Header, go to homepage, icon:logo-wordmark">  
 <svg height="32" class="octicon octicon-mark-github text-white" viewBox="0 0 16 16" version="1.1" width="32" aria-hidden="true"><path fill-rule="evenodd" d="M8 0C3.58 0 0 3.58 0 8c0 3.54 2.29 6.53 5.47 7.59.4.07.55-.17.55-.38 0-.19-.01-.82-.01-1.49-2.01.37-2.53-.49-2.69-.94-.09-.23-.48-.94-.82-1.13-.28-.15-.68-.52-.01-.53.63-.01 1.08.58 1.23.82.72 1.21 1.87.87 2.33.66.07-.52.28-.87.51-1.07-1.78-.2-3.64-.89-3.64-3.95 0-.87.31-1.59.82-2.15-.08-.2-.36-1.02.08-2.12 0 0 .67-.21 2.2.82.64-.18 1.32-.27 2-.27.68 0 1.36.09 2 .27 1.53-1.04 2.2-.82 2.2-.82.44 1.1.16 1.92.08 2.12.51.56.82 1.27.82 2.15 0 3.07-1.87 3.75-3.65 3.95.29.25.54.73.54 1.48 0 1.07-.01 1.93-.01 2.2 0 .21.15.46.55.38A8.013 8.013 0 0016 8c0-4.42-3.58-8-8-8z"></path></svg>  
 </a>  
  
 <div class="d-lg-none css-truncate css-truncate-target width-fit p-2">  
   
  
 </div>  
  
 <div class="d-flex flex-items-center">  
 <a href="/join?ref\_cta=Sign+up&amp;ref\_loc=header+logged+out&amp;ref\_page=%2F%3Cuser-name%3E%2F%3Crepo-name%3E%2Fblob%2Fshow&amp;source=header-repo"  
 class="d-inline-block d-lg-none f5 text-white no-underline border border-gray-dark rounded-2 px-2 py-1 mr-3 mr-sm-5"  
 data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;site header&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/chapter\_6\_zenhub\_guide.md&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="20a5dc16862390ed0ce2e4a836752bd009c0a254aaef5386547c35e75bbd570c"  
 data-ga-click="Sign up, click to sign up for account, ref\_page:/&lt;user-name&gt;/&lt;repo-name&gt;/blob/show;ref\_cta:Sign up;ref\_loc:header logged out">  
 Sign&nbsp;up  
 </a>  
  
 <button class="btn-link d-lg-none mt-1 js-details-target" type="button" aria-label="Toggle navigation" aria-expanded="false">  
 <svg height="24" class="octicon octicon-three-bars text-white" viewBox="0 0 16 16" version="1.1" width="24" aria-hidden="true"><path fill-rule="evenodd" d="M1 2.75A.75.75 0 011.75 2h12.5a.75.75 0 110 1.5H1.75A.75.75 0 011 2.75zm0 5A.75.75 0 011.75 7h12.5a.75.75 0 110 1.5H1.75A.75.75 0 011 7.75zM1.75 12a.75.75 0 100 1.5h12.5a.75.75 0 100-1.5H1.75z"></path></svg>  
 </button>  
 </div>  
</div>  
  
<div class="HeaderMenu HeaderMenu--logged-out position-fixed top-0 right-0 bottom-0 height-fit position-lg-relative d-lg-flex flex-justify-between flex-items-center flex-auto">  
 <div class="d-flex d-lg-none flex-justify-end border-bottom bg-gray-light p-3">  
 <button class="btn-link js-details-target" type="button" aria-label="Toggle navigation" aria-expanded="false">  
 <svg height="24" class="octicon octicon-x text-gray" viewBox="0 0 24 24" version="1.1" width="24" aria-hidden="true"><path fill-rule="evenodd" d="M5.72 5.72a.75.75 0 011.06 0L12 10.94l5.22-5.22a.75.75 0 111.06 1.06L13.06 12l5.22 5.22a.75.75 0 11-1.06 1.06L12 13.06l-5.22 5.22a.75.75 0 01-1.06-1.06L10.94 12 5.72 6.78a.75.75 0 010-1.06z"></path></svg>  
 </button>  
 </div>  
  
 <nav class="mt-0 px-3 px-lg-0 mb-5 mb-lg-0" aria-label="Global">  
 <ul class="d-lg-flex list-style-none">  
 <li class="d-block d-lg-flex flex-lg-nowrap flex-lg-items-center border-bottom border-lg-bottom-0 mr-0 mr-lg-3 edge-item-fix position-relative flex-wrap flex-justify-between d-flex flex-items-center ">  
 <details class="HeaderMenu-details details-overlay details-reset width-full">  
 <summary class="HeaderMenu-summary HeaderMenu-link px-0 py-3 border-0 no-wrap d-block d-lg-inline-block">  
 Why GitHub?  
 <svg x="0px" y="0px" viewBox="0 0 14 8" xml:space="preserve" fill="none" class="icon-chevon-down-mktg position-absolute position-lg-relative">  
 <path d="M1,1l6.2,6L13,1"></path>  
 </svg>  
 </summary>  
 <div class="dropdown-menu flex-auto rounded-1 bg-white px-0 mt-0 pb-4 p-lg-4 position-relative position-lg-absolute left-0 left-lg-n4">  
 <a href="/features" class="py-2 lh-condensed-ultra d-block link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Features">Features <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a>  
 <ul class="list-style-none f5 pb-3">  
 <li class="edge-item-fix"><a href="/features/code-review/" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Code review">Code review</a></li>  
 <li class="edge-item-fix"><a href="/features/project-management/" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Project management">Project management</a></li>  
 <li class="edge-item-fix"><a href="/features/integrations" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Integrations">Integrations</a></li>  
 <li class="edge-item-fix"><a href="/features/actions" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Actions">Actions</a></li>  
 <li class="edge-item-fix"><a href="/features/packages" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to GitHub Packages">Packages</a></li>  
 <li class="edge-item-fix"><a href="/features/security" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Security">Security</a></li>  
 <li class="edge-item-fix"><a href="/features#team-management" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Team management">Team management</a></li>  
 <li class="edge-item-fix"><a href="/features#hosting" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Code hosting">Hosting</a></li>  
 <li class="edge-item-fix hide-xl"><a href="/mobile" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Mobile">Mobile</a></li>  
 </ul>  
  
 <ul class="list-style-none mb-0 border-lg-top pt-lg-3">  
 <li class="edge-item-fix"><a href="/customer-stories" class="py-2 lh-condensed-ultra d-block no-underline link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Customer stories">Customer stories <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 <li class="edge-item-fix"><a href="/security" class="py-2 lh-condensed-ultra d-block no-underline link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Security">Security <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 </ul>  
 </div>  
 </details>  
 </li>  
 <li class="border-bottom border-lg-bottom-0 mr-0 mr-lg-3">  
 <a href="/team" class="HeaderMenu-link no-underline py-3 d-block d-lg-inline-block" data-ga-click="(Logged out) Header, go to Team">Team</a>  
 </li>  
 <li class="border-bottom border-lg-bottom-0 mr-0 mr-lg-3">  
 <a href="/enterprise" class="HeaderMenu-link no-underline py-3 d-block d-lg-inline-block" data-ga-click="(Logged out) Header, go to Enterprise">Enterprise</a>  
 </li>  
  
 <li class="d-block d-lg-flex flex-lg-nowrap flex-lg-items-center border-bottom border-lg-bottom-0 mr-0 mr-lg-3 edge-item-fix position-relative flex-wrap flex-justify-between d-flex flex-items-center ">  
 <details class="HeaderMenu-details details-overlay details-reset width-full">  
 <summary class="HeaderMenu-summary HeaderMenu-link px-0 py-3 border-0 no-wrap d-block d-lg-inline-block">  
 Explore  
 <svg x="0px" y="0px" viewBox="0 0 14 8" xml:space="preserve" fill="none" class="icon-chevon-down-mktg position-absolute position-lg-relative">  
 <path d="M1,1l6.2,6L13,1"></path>  
 </svg>  
 </summary>  
  
 <div class="dropdown-menu flex-auto rounded-1 bg-white px-0 pt-2 pb-0 mt-0 pb-4 p-lg-4 position-relative position-lg-absolute left-0 left-lg-n4">  
 <ul class="list-style-none mb-3">  
 <li class="edge-item-fix"><a href="/explore" class="py-2 lh-condensed-ultra d-block link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Explore">Explore GitHub <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 </ul>  
  
 <h4 class="text-gray-light text-normal text-mono f5 mb-2 border-lg-top pt-lg-3">Learn &amp; contribute</h4>  
 <ul class="list-style-none mb-3">  
 <li class="edge-item-fix"><a href="/topics" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Topics">Topics</a></li>  
 <li class="edge-item-fix"><a href="/collections" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Collections">Collections</a></li>  
 <li class="edge-item-fix"><a href="/trending" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Trending">Trending</a></li>  
 <li class="edge-item-fix"><a href="https://lab.github.com/" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Learning lab">Learning Lab</a></li>  
 <li class="edge-item-fix"><a href="https://opensource.guide" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Open source guides">Open source guides</a></li>  
 </ul>  
  
 <h4 class="text-gray-light text-normal text-mono f5 mb-2 border-lg-top pt-lg-3">Connect with others</h4>  
 <ul class="list-style-none mb-0">  
 <li class="edge-item-fix"><a href="https://github.com/events" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Events">Events</a></li>  
 <li class="edge-item-fix"><a href="https://github.community" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Community forum">Community forum</a></li>  
 <li class="edge-item-fix"><a href="https://education.github.com" class="py-2 pb-0 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to GitHub Education">GitHub Education</a></li>  
 </ul>  
 </div>  
 </details>  
 </li>  
  
 <li class="border-bottom border-lg-bottom-0 mr-0 mr-lg-3">  
 <a href="/marketplace" class="HeaderMenu-link no-underline py-3 d-block d-lg-inline-block" data-ga-click="(Logged out) Header, go to Marketplace">Marketplace</a>  
 </li>  
  
 <li class="d-block d-lg-flex flex-lg-nowrap flex-lg-items-center border-bottom border-lg-bottom-0 mr-0 mr-lg-3 edge-item-fix position-relative flex-wrap flex-justify-between d-flex flex-items-center ">  
 <details class="HeaderMenu-details details-overlay details-reset width-full">  
 <summary class="HeaderMenu-summary HeaderMenu-link px-0 py-3 border-0 no-wrap d-block d-lg-inline-block">  
 Pricing  
 <svg x="0px" y="0px" viewBox="0 0 14 8" xml:space="preserve" fill="none" class="icon-chevon-down-mktg position-absolute position-lg-relative">  
 <path d="M1,1l6.2,6L13,1"></path>  
 </svg>  
 </summary>  
  
 <div class="dropdown-menu flex-auto rounded-1 bg-white px-0 pt-2 pb-4 mt-0 p-lg-4 position-relative position-lg-absolute left-0 left-lg-n4">  
 <a href="/pricing" class="pb-2 lh-condensed-ultra d-block link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Pricing">Plans <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a>  
  
 <ul class="list-style-none mb-3">  
 <li class="edge-item-fix"><a href="/pricing#feature-comparison" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Compare plans">Compare plans</a></li>  
 <li class="edge-item-fix"><a href="https://enterprise.github.com/contact" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Contact Sales">Contact Sales</a></li>  
 </ul>  
  
 <ul class="list-style-none mb-0 border-lg-top pt-lg-3">  
 <li class="edge-item-fix"><a href="/nonprofit" class="py-2 lh-condensed-ultra d-block no-underline link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Nonprofits">Nonprofit <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 <li class="edge-item-fix"><a href="https://education.github.com" class="py-2 pb-0 lh-condensed-ultra d-block no-underline link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Education">Education <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 </ul>  
 </div>  
 </details>  
 </li>  
 </ul>  
 </nav>  
  
 <div class="d-lg-flex flex-items-center px-3 px-lg-0 text-center text-lg-left">  
 <div class="d-lg-flex mb-3 mb-lg-0">  
 <div class="header-search header-search-current js-header-search-current flex-auto flex-self-stretch flex-md-self-auto mr-0 mr-md-3 mb-3 mb-md-0 scoped-search site-scoped-search js-site-search position-relative js-jump-to js-header-search-current-jump-to"

role=“combobox” aria-owns=“jump-to-results” aria-label=“Search or jump to” aria-haspopup=“listbox” aria-expanded=“false” >

<!-- '"` --><!-- </textarea></xmp> --></option></form><form class="js-site-search-form" role="search" aria-label="Site" data-scope-type="Repository" data-scope-id="240391054" data-scoped-search-url="/lijenn/teampsdprototype/search" data-unscoped-search-url="/search" action="/lijenn/teampsdprototype/search" accept-charset="UTF-8" method="get">  
 <label class="form-control input-sm header-search-wrapper p-0 header-search-wrapper-jump-to position-relative d-flex flex-justify-between flex-items-center js-chromeless-input-container">  
 <input type="text"  
 class="form-control input-sm header-search-input jump-to-field js-jump-to-field js-site-search-focus js-site-search-field is-clearable"  
 data-hotkey="s,/"  
 name="q"  
 value=""  
 placeholder="Search"  
 data-unscoped-placeholder="Search GitHub"  
 data-scoped-placeholder="Search"  
 autocapitalize="off"  
 aria-autocomplete="list"  
 aria-controls="jump-to-results"  
 aria-label="Search"  
 data-jump-to-suggestions-path="/\_graphql/GetSuggestedNavigationDestinations"  
 spellcheck="false"  
 autocomplete="off"  
 >  
 <input type="hidden" data-csrf="true" class="js-data-jump-to-suggestions-path-csrf" value="PhmWaTl8wwEgA0CgqGBejKOIR6hILtmpgPnjWF7Xtx4szp5Seez83hMkS9kQEPbd9wsmWFQvwJCEN8SveVTumA==" />  
 <input type="hidden" class="js-site-search-type-field" name="type" >  
 <img src="https://github.githubassets.com/images/search-key-slash.svg" alt="" class="mr-2 header-search-key-slash">  
  
 <div class="Box position-absolute overflow-hidden d-none jump-to-suggestions js-jump-to-suggestions-container">

<svg height="16" width="16" class="octicon octicon-repo flex-shrink-0 js-jump-to-octicon-repo d-none" title="Repository" aria-label="Repository" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M2 2.5A2.5 2.5 0 014.5 0h8.75a.75.75 0 01.75.75v12.5a.75.75 0 01-.75.75h-2.5a.75.75 0 110-1.5h1.75v-2h-8a1 1 0 00-.714 1.7.75.75 0 01-1.072 1.05A2.495 2.495 0 012 11.5v-9zm10.5-1V9h-8c-.356 0-.694.074-1 .208V2.5a1 1 0 011-1h8zM5 12.25v3.25a.25.25 0 00.4.2l1.45-1.087a.25.25 0 01.3 0L8.6 15.7a.25.25 0 00.4-.2v-3.25a.25.25 0 00-.25-.25h-3.5a.25.25 0 00-.25.25z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-project flex-shrink-0 js-jump-to-octicon-project d-none" title="Project" aria-label="Project" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M1.75 0A1.75 1.75 0 000 1.75v12.5C0 15.216.784 16 1.75 16h12.5A1.75 1.75 0 0016 14.25V1.75A1.75 1.75 0 0014.25 0H1.75zM1.5 1.75a.25.25 0 01.25-.25h12.5a.25.25 0 01.25.25v12.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25V1.75zM11.75 3a.75.75 0 00-.75.75v7.5a.75.75 0 001.5 0v-7.5a.75.75 0 00-.75-.75zm-8.25.75a.75.75 0 011.5 0v5.5a.75.75 0 01-1.5 0v-5.5zM8 3a.75.75 0 00-.75.75v3.5a.75.75 0 001.5 0v-3.5A.75.75 0 008 3z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-search flex-shrink-0 js-jump-to-octicon-search d-none" title="Search" aria-label="Search" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M11.5 7a4.499 4.499 0 11-8.998 0A4.499 4.499 0 0111.5 7zm-.82 4.74a6 6 0 111.06-1.06l3.04 3.04a.75.75 0 11-1.06 1.06l-3.04-3.04z"></path></svg>  
</div>  
  
<img class="avatar mr-2 flex-shrink-0 js-jump-to-suggestion-avatar d-none" alt="" aria-label="Team" src="" width="28" height="28">  
  
<div class="jump-to-suggestion-name js-jump-to-suggestion-name flex-auto overflow-hidden text-left no-wrap css-truncate css-truncate-target">  
</div>  
  
<div class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none js-jump-to-badge-search">  
 <span class="js-jump-to-badge-search-text-default d-none" aria-label="in this repository">  
 In this repository  
 </span>  
 <span class="js-jump-to-badge-search-text-global d-none" aria-label="in all of GitHub">  
 All GitHub  
 </span>  
 <span aria-hidden="true" class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>  
  
<div aria-hidden="true" class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none d-on-nav-focus js-jump-to-badge-jump">  
 Jump to  
 <span class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>

No suggested jump to results

<svg height="16" width="16" class="octicon octicon-repo flex-shrink-0 js-jump-to-octicon-repo d-none" title="Repository" aria-label="Repository" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M2 2.5A2.5 2.5 0 014.5 0h8.75a.75.75 0 01.75.75v12.5a.75.75 0 01-.75.75h-2.5a.75.75 0 110-1.5h1.75v-2h-8a1 1 0 00-.714 1.7.75.75 0 01-1.072 1.05A2.495 2.495 0 012 11.5v-9zm10.5-1V9h-8c-.356 0-.694.074-1 .208V2.5a1 1 0 011-1h8zM5 12.25v3.25a.25.25 0 00.4.2l1.45-1.087a.25.25 0 01.3 0L8.6 15.7a.25.25 0 00.4-.2v-3.25a.25.25 0 00-.25-.25h-3.5a.25.25 0 00-.25.25z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-project flex-shrink-0 js-jump-to-octicon-project d-none" title="Project" aria-label="Project" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M1.75 0A1.75 1.75 0 000 1.75v12.5C0 15.216.784 16 1.75 16h12.5A1.75 1.75 0 0016 14.25V1.75A1.75 1.75 0 0014.25 0H1.75zM1.5 1.75a.25.25 0 01.25-.25h12.5a.25.25 0 01.25.25v12.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25V1.75zM11.75 3a.75.75 0 00-.75.75v7.5a.75.75 0 001.5 0v-7.5a.75.75 0 00-.75-.75zm-8.25.75a.75.75 0 011.5 0v5.5a.75.75 0 01-1.5 0v-5.5zM8 3a.75.75 0 00-.75.75v3.5a.75.75 0 001.5 0v-3.5A.75.75 0 008 3z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-search flex-shrink-0 js-jump-to-octicon-search d-none" title="Search" aria-label="Search" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M11.5 7a4.499 4.499 0 11-8.998 0A4.499 4.499 0 0111.5 7zm-.82 4.74a6 6 0 111.06-1.06l3.04 3.04a.75.75 0 11-1.06 1.06l-3.04-3.04z"></path></svg>  
</div>  
  
<img class="avatar mr-2 flex-shrink-0 js-jump-to-suggestion-avatar d-none" alt="" aria-label="Team" src="" width="28" height="28">  
  
<div class="jump-to-suggestion-name js-jump-to-suggestion-name flex-auto overflow-hidden text-left no-wrap css-truncate css-truncate-target">  
</div>  
  
<div class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none js-jump-to-badge-search">  
 <span class="js-jump-to-badge-search-text-default d-none" aria-label="in this repository">  
 In this repository  
 </span>  
 <span class="js-jump-to-badge-search-text-global d-none" aria-label="in all of GitHub">  
 All GitHub  
 </span>  
 <span aria-hidden="true" class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>  
  
<div aria-hidden="true" class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none d-on-nav-focus js-jump-to-badge-jump">  
 Jump to  
 <span class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>

<svg height="16" width="16" class="octicon octicon-repo flex-shrink-0 js-jump-to-octicon-repo d-none" title="Repository" aria-label="Repository" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M2 2.5A2.5 2.5 0 014.5 0h8.75a.75.75 0 01.75.75v12.5a.75.75 0 01-.75.75h-2.5a.75.75 0 110-1.5h1.75v-2h-8a1 1 0 00-.714 1.7.75.75 0 01-1.072 1.05A2.495 2.495 0 012 11.5v-9zm10.5-1V9h-8c-.356 0-.694.074-1 .208V2.5a1 1 0 011-1h8zM5 12.25v3.25a.25.25 0 00.4.2l1.45-1.087a.25.25 0 01.3 0L8.6 15.7a.25.25 0 00.4-.2v-3.25a.25.25 0 00-.25-.25h-3.5a.25.25 0 00-.25.25z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-project flex-shrink-0 js-jump-to-octicon-project d-none" title="Project" aria-label="Project" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M1.75 0A1.75 1.75 0 000 1.75v12.5C0 15.216.784 16 1.75 16h12.5A1.75 1.75 0 0016 14.25V1.75A1.75 1.75 0 0014.25 0H1.75zM1.5 1.75a.25.25 0 01.25-.25h12.5a.25.25 0 01.25.25v12.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25V1.75zM11.75 3a.75.75 0 00-.75.75v7.5a.75.75 0 001.5 0v-7.5a.75.75 0 00-.75-.75zm-8.25.75a.75.75 0 011.5 0v5.5a.75.75 0 01-1.5 0v-5.5zM8 3a.75.75 0 00-.75.75v3.5a.75.75 0 001.5 0v-3.5A.75.75 0 008 3z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-search flex-shrink-0 js-jump-to-octicon-search d-none" title="Search" aria-label="Search" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M11.5 7a4.499 4.499 0 11-8.998 0A4.499 4.499 0 0111.5 7zm-.82 4.74a6 6 0 111.06-1.06l3.04 3.04a.75.75 0 11-1.06 1.06l-3.04-3.04z"></path></svg>  
</div>  
  
<img class="avatar mr-2 flex-shrink-0 js-jump-to-suggestion-avatar d-none" alt="" aria-label="Team" src="" width="28" height="28">  
  
<div class="jump-to-suggestion-name js-jump-to-suggestion-name flex-auto overflow-hidden text-left no-wrap css-truncate css-truncate-target">  
</div>  
  
<div class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none js-jump-to-badge-search">  
 <span class="js-jump-to-badge-search-text-default d-none" aria-label="in this repository">  
 In this repository  
 </span>  
 <span class="js-jump-to-badge-search-text-global d-none" aria-label="in all of GitHub">  
 All GitHub  
 </span>  
 <span aria-hidden="true" class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>  
  
<div aria-hidden="true" class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none d-on-nav-focus js-jump-to-badge-jump">  
 Jump to  
 <span class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>

</div>  
 </label>

</div>  
  
 <a href="/login?return\_to=%2Flijenn%2Fteampsdprototype%2Fblob%2Fgh-pages%2Fchapter\_6\_zenhub\_guide.md"  
 class="HeaderMenu-link no-underline mr-3"  
 data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;site header menu&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/chapter\_6\_zenhub\_guide.md&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="dd27b9864f95a6978b92b6f64cc2d5d6a67e8a7b60100666e298fc1428e01e7e"  
 data-ga-click="(Logged out) Header, clicked Sign in, text:sign-in">  
 Sign&nbsp;in  
 </a>  
 <a href="/join?ref\_cta=Sign+up&amp;ref\_loc=header+logged+out&amp;ref\_page=%2F%3Cuser-name%3E%2F%3Crepo-name%3E%2Fblob%2Fshow&amp;source=header-repo&amp;source\_repo=lijenn%2Fteampsdprototype"  
 class="HeaderMenu-link d-inline-block no-underline border border-gray-dark rounded-1 px-2 py-1"  
 data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;site header menu&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/chapter\_6\_zenhub\_guide.md&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="dd27b9864f95a6978b92b6f64cc2d5d6a67e8a7b60100666e298fc1428e01e7e"  
 data-ga-click="Sign up, click to sign up for account, ref\_page:/&lt;user-name&gt;/&lt;repo-name&gt;/blob/show;ref\_cta:Sign up;ref\_loc:header logged out">  
 Sign&nbsp;up  
 </a>  
 </div>  
</div>

<button class="flash-close js-flash-close" type="button" aria-label="Dismiss this message">  
 <svg class="octicon octicon-x" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M3.72 3.72a.75.75 0 011.06 0L8 6.94l3.22-3.22a.75.75 0 111.06 1.06L9.06 8l3.22 3.22a.75.75 0 11-1.06 1.06L8 9.06l-3.22 3.22a.75.75 0 01-1.06-1.06L6.94 8 3.72 4.78a.75.75 0 010-1.06z"></path></svg>  
</button>  
  
 <div class="js-flash-template-message"></div>

<div itemscope itemtype="http://schema.org/SoftwareSourceCode" class="">  
<main >

<div class="d-flex mb-3 px-3 px-md-4 px-lg-5">  
  
 <div class="flex-auto min-width-0 width-fit mr-3">  
 <h1 class=" d-flex flex-wrap flex-items-center break-word f3 text-normal">  
<svg class="octicon octicon-repo-forked text-gray" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M5 3.25a.75.75 0 11-1.5 0 .75.75 0 011.5 0zm0 2.122a2.25 2.25 0 10-1.5 0v.878A2.25 2.25 0 005.75 8.5h1.5v2.128a2.251 2.251 0 101.5 0V8.5h1.5a2.25 2.25 0 002.25-2.25v-.878a2.25 2.25 0 10-1.5 0v.878a.75.75 0 01-.75.75h-4.5A.75.75 0 015 6.25v-.878zm3.75 7.378a.75.75 0 11-1.5 0 .75.75 0 011.5 0zm3-8.75a.75.75 0 100-1.5.75.75 0 000 1.5z"></path></svg>

lijenn / teampsdprototype

forked from lzim/teampsd

</div>  
  
 <ul class="pagehead-actions flex-shrink-0 d-none d-md-inline" style="padding: 2px 0;">

Watch 0

Star 0

Fork 21

Code

Issues 0

Pull requests 1

Actions

Projects 0

Security

Insights

<details class="details-overlay details-reset position-relative">

<svg class="octicon octicon-kebab-horizontal" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path d="M8 9a1.5 1.5 0 100-3 1.5 1.5 0 000 3zM1.5 9a1.5 1.5 0 100-3 1.5 1.5 0 000 3zm13 0a1.5 1.5 0 100-3 1.5 1.5 0 000 3z"></path></svg>  
 <span class="sr-only">More</span>  
 </div>

<ul>  
 <li data-menu-item="code-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/tree/gh-pages" href="/lijenn/teampsdprototype/tree/gh-pages">  
 Code

<li data-menu-item="issues-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/issues" href="/lijenn/teampsdprototype/issues">  
 Issues

<li data-menu-item="pull-requests-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/pulls" href="/lijenn/teampsdprototype/pulls">  
 Pull requests

<li data-menu-item="actions-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/actions" href="/lijenn/teampsdprototype/actions">  
 Actions

<li data-menu-item="projects-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/projects" href="/lijenn/teampsdprototype/projects">  
 Projects

<li data-menu-item="security-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/security" href="/lijenn/teampsdprototype/security">  
 Security

<li data-menu-item="insights-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/pulse" href="/lijenn/teampsdprototype/pulse">  
 Insights

</ul>

<a class="d-none js-permalink-shortcut" data-hotkey="y" href="/lijenn/teampsdprototype/blob/c5a23fb5eb8c43770c31eae03830b26bb7beb932/chapter\_6\_zenhub\_guide.md">Permalink</a>  
  
<!-- blob contrib key: blob\_contributors:v22:fa23cd57880c300656fc3bab65dae858 -->  
 <signup-prompt class="signup-prompt-bg rounded-1" data-prompt="signup" hidden>  
<div class="signup-prompt p-4 text-center mb-4 rounded-1">  
 <div class="position-relative">  
 <button  
 type="button"  
 class="position-absolute top-0 right-0 btn-link link-gray"  
 data-action="click:signup-prompt#dismiss"  
 data-ga-click="(Logged out) Sign up prompt, clicked Dismiss, text:dismiss"  
 >  
 Dismiss  
 </button>  
 <h3 class="pt-2">Join GitHub today</h3>  
 <p class="col-6 mx-auto">GitHub is home to over 50 million developers working together to host and review code, manage projects, and build software together.</p>  
 <a class="btn btn-primary" data-ga-click="(Logged out) Sign up prompt, clicked Sign up, text:sign-up" data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;files signup prompt&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/chapter\_6\_zenhub\_guide.md&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="439e3a2b2cb0fd768f8859dfd98953a64ffa098d61b767b6e67d71b947de1eec" href="/join?source=prompt-blob-show&amp;source\_repo=lijenn%2Fteampsdprototype">Sign up</a>  
 </div>  
</div>

<div class="d-flex flex-items-start flex-shrink-0 pb-3 flex-wrap flex-md-nowrap flex-justify-between flex-md-justify-start">

gh-pages

<include-fragment class="SelectMenu-loading" aria-label="Menu is loading">  
 <svg class="octicon octicon-octoface anim-pulse" height="32" viewBox="0 0 16 16" version="1.1" width="32" aria-hidden="true"><path fill-rule="evenodd" d="M14.7 5.34c.13-.32.55-1.59-.13-3.31 0 0-1.05-.33-3.44 1.3-1-.28-2.07-.32-3.13-.32s-2.13.04-3.13.32c-2.39-1.64-3.44-1.3-3.44-1.3-.68 1.72-.26 2.99-.13 3.31C.49 6.21 0 7.33 0 8.69 0 13.84 3.33 15 7.98 15S16 13.84 16 8.69c0-1.36-.49-2.48-1.3-3.35zM8 14.02c-3.3 0-5.98-.15-5.98-3.35 0-.76.38-1.48 1.02-2.07 1.07-.98 2.9-.46 4.96-.46 2.07 0 3.88-.52 4.96.46.65.59 1.02 1.3 1.02 2.07 0 3.19-2.68 3.35-5.98 3.35zM5.49 9.01c-.66 0-1.2.8-1.2 1.78s.54 1.79 1.2 1.79c.66 0 1.2-.8 1.2-1.79s-.54-1.78-1.2-1.78zm5.02 0c-.66 0-1.2.79-1.2 1.78s.54 1.79 1.2 1.79c.66 0 1.2-.8 1.2-1.79s-.53-1.78-1.2-1.78z"></path></svg>  
 </include-fragment>  
</div>

<h2 id="blob-path" class="breadcrumb flex-auto min-width-0 text-normal mx-0 mx-md-3 width-full width-md-auto flex-order-1 flex-md-order-none mt-3 mt-md-0">  
 <span class="js-repo-root text-bold"><span class="js-path-segment d-inline-block wb-break-all"><a data-pjax="true" href="/lijenn/teampsdprototype/tree/gh-pages"><span>teampsdprototype</span></a></span></span><span class="separator">/</span><strong class="final-path">chapter\_6\_zenhub\_guide.md</strong>  
 </h2>  
 <a href="/lijenn/teampsdprototype/find/gh-pages"  
 class="js-pjax-capture-input btn mr-2 d-none d-md-block"  
 data-pjax  
 data-hotkey="t">  
 Go to file  
 </a>  
  
 <details class="details-overlay details-reset position-relative" id="blob-more-options-details">

Go to file T

Go to line L

Copy path

<include-fragment src="/lijenn/teampsdprototype/contributors/gh-pages/chapter\_6\_zenhub\_guide.md" class="commit-loader">  
 <div class="Box-header Box-header--blue d-flex flex-items-center">  
 <div class="Skeleton avatar avatar-user flex-shrink-0 ml-n1 mr-n1 mt-n1 mb-n1" style="width:24px;height:24px;"></div>  
 <div class="Skeleton Skeleton--text col-5 ml-2">&nbsp;</div>  
 </div>  
  
 <div class="Box-body d-flex flex-items-center" >  
 <div class="Skeleton Skeleton--text col-1">&nbsp;</div>  
 <span class="text-red h6 loader-error">Cannot retrieve contributors at this time</span>  
 </div>

126 lines (97 sloc)  
 <span class="file-info-divider"></span>  
8.98 KB

<div class="BtnGroup">  
 <a class="btn btn-sm BtnGroup-item " href="/lijenn/teampsdprototype/raw/gh-pages/chapter\_6\_zenhub\_guide.md" id="raw-url" role="button">Raw</a>  
 <a class="btn js-update-url-with-hash btn-sm BtnGroup-item " href="/lijenn/teampsdprototype/blame/gh-pages/chapter\_6\_zenhub\_guide.md" data-hotkey="b" role="button">Blame</a>  
</div>  
  
<div>  
 <a class="btn-octicon tooltipped tooltipped-nw js-remove-unless-platform"  
 data-platforms="windows,mac"  
 href="https://desktop.github.com"  
 aria-label="Open this file in GitHub Desktop"  
 data-ga-click="Repository, open with desktop">  
 <svg class="octicon octicon-device-desktop" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M1.75 2.5h12.5a.25.25 0 01.25.25v7.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25v-7.5a.25.25 0 01.25-.25zM14.25 1H1.75A1.75 1.75 0 000 2.75v7.5C0 11.216.784 12 1.75 12h3.727c-.1 1.041-.52 1.872-1.292 2.757A.75.75 0 004.75 16h6.5a.75.75 0 00.565-1.243c-.772-.885-1.193-1.716-1.292-2.757h3.727A1.75 1.75 0 0016 10.25v-7.5A1.75 1.75 0 0014.25 1zM9.018 12H6.982a5.72 5.72 0 01-.765 2.5h3.566a5.72 5.72 0 01-.765-2.5z"></path></svg>  
 </a>  
  
 <button type="button" class="btn-octicon disabled tooltipped tooltipped-nw"  
 aria-label="You must be signed in to make or propose changes">  
 <svg class="octicon octicon-pencil" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M11.013 1.427a1.75 1.75 0 012.474 0l1.086 1.086a1.75 1.75 0 010 2.474l-8.61 8.61c-.21.21-.47.364-.756.445l-3.251.93a.75.75 0 01-.927-.928l.929-3.25a1.75 1.75 0 01.445-.758l8.61-8.61zm1.414 1.06a.25.25 0 00-.354 0L10.811 3.75l1.439 1.44 1.263-1.263a.25.25 0 000-.354l-1.086-1.086zM11.189 6.25L9.75 4.81l-6.286 6.287a.25.25 0 00-.064.108l-.558 1.953 1.953-.558a.249.249 0 00.108-.064l6.286-6.286z"></path></svg>  
 </button>  
 <button type="button" class="btn-octicon btn-octicon-danger disabled tooltipped tooltipped-nw"  
 aria-label="You must be signed in to make or propose changes">  
 <svg class="octicon octicon-trashcan" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M6.5 1.75a.25.25 0 01.25-.25h2.5a.25.25 0 01.25.25V3h-3V1.75zm4.5 0V3h2.25a.75.75 0 010 1.5H2.75a.75.75 0 010-1.5H5V1.75C5 .784 5.784 0 6.75 0h2.5C10.216 0 11 .784 11 1.75zM4.496 6.675a.75.75 0 10-1.492.15l.66 6.6A1.75 1.75 0 005.405 15h5.19c.9 0 1.652-.681 1.741-1.576l.66-6.6a.75.75 0 00-1.492-.149l-.66 6.6a.25.25 0 01-.249.225h-5.19a.25.25 0 01-.249-.225l-.66-6.6z"></path></svg>  
 </button>  
</div>

<article class="markdown-body entry-content container-lg" itemprop="text"><h1><a id="user-content-manage-with-zenhub" class="anchor" aria-hidden="true" href="#manage-with-zenhub"><svg class="octicon octicon-link" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M7.775 3.275a.75.75 0 001.06 1.06l1.25-1.25a2 2 0 112.83 2.83l-2.5 2.5a2 2 0 01-2.83 0 .75.75 0 00-1.06 1.06 3.5 3.5 0 004.95 0l2.5-2.5a3.5 3.5 0 00-4.95-4.95l-1.25 1.25zm-4.69 9.64a2 2 0 010-2.83l2.5-2.5a2 2 0 012.83 0 .75.75 0 001.06-1.06 3.5 3.5 0 00-4.95 0l-2.5 2.5a3.5 3.5 0 004.95 4.95l1.25-1.25a.75.75 0 00-1.06-1.06l-1.25 1.25a2 2 0 01-2.83 0z"></path></svg></a>Manage with ZenHub</h1>

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Add Epics to Issues

Define Workspaces

Add Dependencies

Estimate Issues

9 Clicks for Issues

Manage Workflow

Filter Workspace

Track Notifications

Create & Manage Issues

View Reports

Test First Epic (go\_live)

</div>

Go

<div class="Popover anim-scale-in js-tagsearch-popover"  
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 data-tagsearch-url="/lijenn/teampsdprototype/find-definition"  
 data-tagsearch-ref="gh-pages"  
 data-tagsearch-path="chapter\_6\_zenhub\_guide.md"  
 data-tagsearch-lang="Markdown"  
 data-hydro-click="{&quot;event\_type&quot;:&quot;code\_navigation.click\_on\_symbol&quot;,&quot;payload&quot;:{&quot;action&quot;:&quot;click\_on\_symbol&quot;,&quot;repository\_id&quot;:240391054,&quot;ref&quot;:&quot;gh-pages&quot;,&quot;language&quot;:&quot;Markdown&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/chapter\_6\_zenhub\_guide.md&quot;,&quot;user\_id&quot;:null}}"  
 data-hydro-click-hmac="d2751dbea18a639dc521b3501c831bf3b5ddcef012ee199eaaaf41a3a8999a8b">

<div class="TagsearchPopover-content js-tagsearch-popover-content overflow-auto" style="will-change:transform;">  
</div>

<ul class="list-style-none d-flex flex-wrap col-12 col-lg-5 flex-justify-center flex-lg-justify-between mb-2 mb-lg-0">  
 <li class="mr-3 mr-lg-0">&copy; 2020 GitHub, Inc.</li>  
 <li class="mr-3 mr-lg-0"><a data-ga-click="Footer, go to terms, text:terms" href="https://github.com/site/terms">Terms</a></li>  
 <li class="mr-3 mr-lg-0"><a data-ga-click="Footer, go to privacy, text:privacy" href="https://github.com/site/privacy">Privacy</a></li>  
 <li class="mr-3 mr-lg-0"><a data-ga-click="Footer, go to security, text:security" href="https://github.com/security">Security</a></li>  
 <li class="mr-3 mr-lg-0"><a href="https://githubstatus.com/" data-ga-click="Footer, go to status, text:status">Status</a></li>  
 <li><a data-ga-click="Footer, go to help, text:help" href="https://docs.github.com">Help</a></li>  
  
</ul>  
  
<a aria-label="Homepage" title="GitHub" class="footer-octicon d-none d-lg-block mx-lg-4" href="https://github.com">  
 <svg height="24" class="octicon octicon-mark-github" viewBox="0 0 16 16" version="1.1" width="24" aria-hidden="true"><path fill-rule="evenodd" d="M8 0C3.58 0 0 3.58 0 8c0 3.54 2.29 6.53 5.47 7.59.4.07.55-.17.55-.38 0-.19-.01-.82-.01-1.49-2.01.37-2.53-.49-2.69-.94-.09-.23-.48-.94-.82-1.13-.28-.15-.68-.52-.01-.53.63-.01 1.08.58 1.23.82.72 1.21 1.87.87 2.33.66.07-.52.28-.87.51-1.07-1.78-.2-3.64-.89-3.64-3.95 0-.87.31-1.59.82-2.15-.08-.2-.36-1.02.08-2.12 0 0 .67-.21 2.2.82.64-.18 1.32-.27 2-.27.68 0 1.36.09 2 .27 1.53-1.04 2.2-.82 2.2-.82.44 1.1.16 1.92.08 2.12.51.56.82 1.27.82 2.15 0 3.07-1.87 3.75-3.65 3.95.29.25.54.73.54 1.48 0 1.07-.01 1.93-.01 2.2 0 .21.15.46.55.38A8.013 8.013 0 0016 8c0-4.42-3.58-8-8-8z"></path></svg>

Contact GitHub

Pricing

API

Training

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About

<span class="f6 text-gray-light"></span>

<svg class="octicon octicon-alert" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M8.22 1.754a.25.25 0 00-.44 0L1.698 13.132a.25.25 0 00.22.368h12.164a.25.25 0 00.22-.368L8.22 1.754zm-1.763-.707c.659-1.234 2.427-1.234 3.086 0l6.082 11.378A1.75 1.75 0 0114.082 15H1.918a1.75 1.75 0 01-1.543-2.575L6.457 1.047zM9 11a1 1 0 11-2 0 1 1 0 012 0zm-.25-5.25a.75.75 0 00-1.5 0v2.5a.75.75 0 001.5 0v-2.5z"></path></svg>  
<button type="button" class="flash-close js-ajax-error-dismiss" aria-label="Dismiss error">  
 <svg class="octicon octicon-x" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M3.72 3.72a.75.75 0 011.06 0L8 6.94l3.22-3.22a.75.75 0 111.06 1.06L9.06 8l3.22 3.22a.75.75 0 11-1.06 1.06L8 9.06l-3.22 3.22a.75.75 0 01-1.06-1.06L6.94 8 3.72 4.78a.75.75 0 010-1.06z"></path></svg>  
</button>  
You can’t perform that action at this time.

<svg class="octicon octicon-alert" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M8.22 1.754a.25.25 0 00-.44 0L1.698 13.132a.25.25 0 00.22.368h12.164a.25.25 0 00.22-.368L8.22 1.754zm-1.763-.707c.659-1.234 2.427-1.234 3.086 0l6.082 11.378A1.75 1.75 0 0114.082 15H1.918a1.75 1.75 0 01-1.543-2.575L6.457 1.047zM9 11a1 1 0 11-2 0 1 1 0 012 0zm-.25-5.25a.75.75 0 00-1.5 0v2.5a.75.75 0 001.5 0v-2.5z"></path></svg>  
<span class="js-stale-session-flash-signed-in" hidden>You signed in with another tab or window. <a href="">Reload</a> to refresh your session.</span>  
<span class="js-stale-session-flash-signed-out" hidden>You signed out in another tab or window. <a href="">Reload</a> to refresh your session.</span>

#000000">

<a href="#start-of-content" class="px-2 py-4 bg-blue text-white show-on-focus js-skip-to-content">Skip to content</a>  
 <span class="Progress progress-pjax-loader position-fixed width-full js-pjax-loader-bar">  
 <span class="progress-pjax-loader-bar top-0 left-0" style="width: 0%;"></span>  
 </span>  
  
  
  
  
  
  
 <header class="Header-old header-logged-out js-details-container Details position-relative f4 py-2" role="banner">

<div class="d-flex flex-justify-between flex-items-center">  
 <a class="mr-4" href="https://github.com/" aria-label="Homepage" data-ga-click="(Logged out) Header, go to homepage, icon:logo-wordmark">  
 <svg height="32" class="octicon octicon-mark-github text-white" viewBox="0 0 16 16" version="1.1" width="32" aria-hidden="true"><path fill-rule="evenodd" d="M8 0C3.58 0 0 3.58 0 8c0 3.54 2.29 6.53 5.47 7.59.4.07.55-.17.55-.38 0-.19-.01-.82-.01-1.49-2.01.37-2.53-.49-2.69-.94-.09-.23-.48-.94-.82-1.13-.28-.15-.68-.52-.01-.53.63-.01 1.08.58 1.23.82.72 1.21 1.87.87 2.33.66.07-.52.28-.87.51-1.07-1.78-.2-3.64-.89-3.64-3.95 0-.87.31-1.59.82-2.15-.08-.2-.36-1.02.08-2.12 0 0 .67-.21 2.2.82.64-.18 1.32-.27 2-.27.68 0 1.36.09 2 .27 1.53-1.04 2.2-.82 2.2-.82.44 1.1.16 1.92.08 2.12.51.56.82 1.27.82 2.15 0 3.07-1.87 3.75-3.65 3.95.29.25.54.73.54 1.48 0 1.07-.01 1.93-.01 2.2 0 .21.15.46.55.38A8.013 8.013 0 0016 8c0-4.42-3.58-8-8-8z"></path></svg>  
 </a>  
  
 <div class="d-lg-none css-truncate css-truncate-target width-fit p-2">  
   
  
 </div>  
  
 <div class="d-flex flex-items-center">  
 <a href="/join?ref\_cta=Sign+up&amp;ref\_loc=header+logged+out&amp;ref\_page=%2F%3Cuser-name%3E%2F%3Crepo-name%3E%2Fblob%2Fshow&amp;source=header-repo"  
 class="d-inline-block d-lg-none f5 text-white no-underline border border-gray-dark rounded-2 px-2 py-1 mr-3 mr-sm-5"  
 data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;site header&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/chapter\_7\_glossary.md&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="7f46e888c41ecaababbf041b510483f5826a985eabac99b6ca082755ca621e7a"  
 data-ga-click="Sign up, click to sign up for account, ref\_page:/&lt;user-name&gt;/&lt;repo-name&gt;/blob/show;ref\_cta:Sign up;ref\_loc:header logged out">  
 Sign&nbsp;up  
 </a>  
  
 <button class="btn-link d-lg-none mt-1 js-details-target" type="button" aria-label="Toggle navigation" aria-expanded="false">  
 <svg height="24" class="octicon octicon-three-bars text-white" viewBox="0 0 16 16" version="1.1" width="24" aria-hidden="true"><path fill-rule="evenodd" d="M1 2.75A.75.75 0 011.75 2h12.5a.75.75 0 110 1.5H1.75A.75.75 0 011 2.75zm0 5A.75.75 0 011.75 7h12.5a.75.75 0 110 1.5H1.75A.75.75 0 011 7.75zM1.75 12a.75.75 0 100 1.5h12.5a.75.75 0 100-1.5H1.75z"></path></svg>  
 </button>  
 </div>  
</div>  
  
<div class="HeaderMenu HeaderMenu--logged-out position-fixed top-0 right-0 bottom-0 height-fit position-lg-relative d-lg-flex flex-justify-between flex-items-center flex-auto">  
 <div class="d-flex d-lg-none flex-justify-end border-bottom bg-gray-light p-3">  
 <button class="btn-link js-details-target" type="button" aria-label="Toggle navigation" aria-expanded="false">  
 <svg height="24" class="octicon octicon-x text-gray" viewBox="0 0 24 24" version="1.1" width="24" aria-hidden="true"><path fill-rule="evenodd" d="M5.72 5.72a.75.75 0 011.06 0L12 10.94l5.22-5.22a.75.75 0 111.06 1.06L13.06 12l5.22 5.22a.75.75 0 11-1.06 1.06L12 13.06l-5.22 5.22a.75.75 0 01-1.06-1.06L10.94 12 5.72 6.78a.75.75 0 010-1.06z"></path></svg>  
 </button>  
 </div>  
  
 <nav class="mt-0 px-3 px-lg-0 mb-5 mb-lg-0" aria-label="Global">  
 <ul class="d-lg-flex list-style-none">  
 <li class="d-block d-lg-flex flex-lg-nowrap flex-lg-items-center border-bottom border-lg-bottom-0 mr-0 mr-lg-3 edge-item-fix position-relative flex-wrap flex-justify-between d-flex flex-items-center ">  
 <details class="HeaderMenu-details details-overlay details-reset width-full">  
 <summary class="HeaderMenu-summary HeaderMenu-link px-0 py-3 border-0 no-wrap d-block d-lg-inline-block">  
 Why GitHub?  
 <svg x="0px" y="0px" viewBox="0 0 14 8" xml:space="preserve" fill="none" class="icon-chevon-down-mktg position-absolute position-lg-relative">  
 <path d="M1,1l6.2,6L13,1"></path>  
 </svg>  
 </summary>  
 <div class="dropdown-menu flex-auto rounded-1 bg-white px-0 mt-0 pb-4 p-lg-4 position-relative position-lg-absolute left-0 left-lg-n4">  
 <a href="/features" class="py-2 lh-condensed-ultra d-block link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Features">Features <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a>  
 <ul class="list-style-none f5 pb-3">  
 <li class="edge-item-fix"><a href="/features/code-review/" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Code review">Code review</a></li>  
 <li class="edge-item-fix"><a href="/features/project-management/" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Project management">Project management</a></li>  
 <li class="edge-item-fix"><a href="/features/integrations" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Integrations">Integrations</a></li>  
 <li class="edge-item-fix"><a href="/features/actions" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Actions">Actions</a></li>  
 <li class="edge-item-fix"><a href="/features/packages" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to GitHub Packages">Packages</a></li>  
 <li class="edge-item-fix"><a href="/features/security" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Security">Security</a></li>  
 <li class="edge-item-fix"><a href="/features#team-management" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Team management">Team management</a></li>  
 <li class="edge-item-fix"><a href="/features#hosting" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Code hosting">Hosting</a></li>  
 <li class="edge-item-fix hide-xl"><a href="/mobile" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Mobile">Mobile</a></li>  
 </ul>  
  
 <ul class="list-style-none mb-0 border-lg-top pt-lg-3">  
 <li class="edge-item-fix"><a href="/customer-stories" class="py-2 lh-condensed-ultra d-block no-underline link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Customer stories">Customer stories <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 <li class="edge-item-fix"><a href="/security" class="py-2 lh-condensed-ultra d-block no-underline link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Security">Security <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 </ul>  
 </div>  
 </details>  
 </li>  
 <li class="border-bottom border-lg-bottom-0 mr-0 mr-lg-3">  
 <a href="/team" class="HeaderMenu-link no-underline py-3 d-block d-lg-inline-block" data-ga-click="(Logged out) Header, go to Team">Team</a>  
 </li>  
 <li class="border-bottom border-lg-bottom-0 mr-0 mr-lg-3">  
 <a href="/enterprise" class="HeaderMenu-link no-underline py-3 d-block d-lg-inline-block" data-ga-click="(Logged out) Header, go to Enterprise">Enterprise</a>  
 </li>  
  
 <li class="d-block d-lg-flex flex-lg-nowrap flex-lg-items-center border-bottom border-lg-bottom-0 mr-0 mr-lg-3 edge-item-fix position-relative flex-wrap flex-justify-between d-flex flex-items-center ">  
 <details class="HeaderMenu-details details-overlay details-reset width-full">  
 <summary class="HeaderMenu-summary HeaderMenu-link px-0 py-3 border-0 no-wrap d-block d-lg-inline-block">  
 Explore  
 <svg x="0px" y="0px" viewBox="0 0 14 8" xml:space="preserve" fill="none" class="icon-chevon-down-mktg position-absolute position-lg-relative">  
 <path d="M1,1l6.2,6L13,1"></path>  
 </svg>  
 </summary>  
  
 <div class="dropdown-menu flex-auto rounded-1 bg-white px-0 pt-2 pb-0 mt-0 pb-4 p-lg-4 position-relative position-lg-absolute left-0 left-lg-n4">  
 <ul class="list-style-none mb-3">  
 <li class="edge-item-fix"><a href="/explore" class="py-2 lh-condensed-ultra d-block link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Explore">Explore GitHub <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 </ul>  
  
 <h4 class="text-gray-light text-normal text-mono f5 mb-2 border-lg-top pt-lg-3">Learn &amp; contribute</h4>  
 <ul class="list-style-none mb-3">  
 <li class="edge-item-fix"><a href="/topics" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Topics">Topics</a></li>  
 <li class="edge-item-fix"><a href="/collections" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Collections">Collections</a></li>  
 <li class="edge-item-fix"><a href="/trending" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Trending">Trending</a></li>  
 <li class="edge-item-fix"><a href="https://lab.github.com/" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Learning lab">Learning Lab</a></li>  
 <li class="edge-item-fix"><a href="https://opensource.guide" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Open source guides">Open source guides</a></li>  
 </ul>  
  
 <h4 class="text-gray-light text-normal text-mono f5 mb-2 border-lg-top pt-lg-3">Connect with others</h4>  
 <ul class="list-style-none mb-0">  
 <li class="edge-item-fix"><a href="https://github.com/events" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Events">Events</a></li>  
 <li class="edge-item-fix"><a href="https://github.community" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Community forum">Community forum</a></li>  
 <li class="edge-item-fix"><a href="https://education.github.com" class="py-2 pb-0 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to GitHub Education">GitHub Education</a></li>  
 </ul>  
 </div>  
 </details>  
 </li>  
  
 <li class="border-bottom border-lg-bottom-0 mr-0 mr-lg-3">  
 <a href="/marketplace" class="HeaderMenu-link no-underline py-3 d-block d-lg-inline-block" data-ga-click="(Logged out) Header, go to Marketplace">Marketplace</a>  
 </li>  
  
 <li class="d-block d-lg-flex flex-lg-nowrap flex-lg-items-center border-bottom border-lg-bottom-0 mr-0 mr-lg-3 edge-item-fix position-relative flex-wrap flex-justify-between d-flex flex-items-center ">  
 <details class="HeaderMenu-details details-overlay details-reset width-full">  
 <summary class="HeaderMenu-summary HeaderMenu-link px-0 py-3 border-0 no-wrap d-block d-lg-inline-block">  
 Pricing  
 <svg x="0px" y="0px" viewBox="0 0 14 8" xml:space="preserve" fill="none" class="icon-chevon-down-mktg position-absolute position-lg-relative">  
 <path d="M1,1l6.2,6L13,1"></path>  
 </svg>  
 </summary>  
  
 <div class="dropdown-menu flex-auto rounded-1 bg-white px-0 pt-2 pb-4 mt-0 p-lg-4 position-relative position-lg-absolute left-0 left-lg-n4">  
 <a href="/pricing" class="pb-2 lh-condensed-ultra d-block link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Pricing">Plans <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a>  
  
 <ul class="list-style-none mb-3">  
 <li class="edge-item-fix"><a href="/pricing#feature-comparison" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Compare plans">Compare plans</a></li>  
 <li class="edge-item-fix"><a href="https://enterprise.github.com/contact" class="py-2 lh-condensed-ultra d-block link-gray no-underline f5" data-ga-click="(Logged out) Header, go to Contact Sales">Contact Sales</a></li>  
 </ul>  
  
 <ul class="list-style-none mb-0 border-lg-top pt-lg-3">  
 <li class="edge-item-fix"><a href="/nonprofit" class="py-2 lh-condensed-ultra d-block no-underline link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Nonprofits">Nonprofit <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 <li class="edge-item-fix"><a href="https://education.github.com" class="py-2 pb-0 lh-condensed-ultra d-block no-underline link-gray-dark no-underline h5 Bump-link--hover" data-ga-click="(Logged out) Header, go to Education">Education <span class="Bump-link-symbol float-right text-normal text-gray-light">&rarr;</span></a></li>  
 </ul>  
 </div>  
 </details>  
 </li>  
 </ul>  
 </nav>  
  
 <div class="d-lg-flex flex-items-center px-3 px-lg-0 text-center text-lg-left">  
 <div class="d-lg-flex mb-3 mb-lg-0">  
 <div class="header-search header-search-current js-header-search-current flex-auto flex-self-stretch flex-md-self-auto mr-0 mr-md-3 mb-3 mb-md-0 scoped-search site-scoped-search js-site-search position-relative js-jump-to js-header-search-current-jump-to"

role=“combobox” aria-owns=“jump-to-results” aria-label=“Search or jump to” aria-haspopup=“listbox” aria-expanded=“false” >

<!-- '"` --><!-- </textarea></xmp> --></option></form><form class="js-site-search-form" role="search" aria-label="Site" data-scope-type="Repository" data-scope-id="240391054" data-scoped-search-url="/lijenn/teampsdprototype/search" data-unscoped-search-url="/search" action="/lijenn/teampsdprototype/search" accept-charset="UTF-8" method="get">  
 <label class="form-control input-sm header-search-wrapper p-0 header-search-wrapper-jump-to position-relative d-flex flex-justify-between flex-items-center js-chromeless-input-container">  
 <input type="text"  
 class="form-control input-sm header-search-input jump-to-field js-jump-to-field js-site-search-focus js-site-search-field is-clearable"  
 data-hotkey="s,/"  
 name="q"  
 value=""  
 placeholder="Search"  
 data-unscoped-placeholder="Search GitHub"  
 data-scoped-placeholder="Search"  
 autocapitalize="off"  
 aria-autocomplete="list"  
 aria-controls="jump-to-results"  
 aria-label="Search"  
 data-jump-to-suggestions-path="/\_graphql/GetSuggestedNavigationDestinations"  
 spellcheck="false"  
 autocomplete="off"  
 >  
 <input type="hidden" data-csrf="true" class="js-data-jump-to-suggestions-path-csrf" value="f6U6yILFCBdHTVJhSQHbhfH0ukI+/qIhbLBKxk11A5URHVr0wdsDq3HqI6jwOwr3F8DmBryl0UjPR7yAuibcWw==" />  
 <input type="hidden" class="js-site-search-type-field" name="type" >  
 <img src="https://github.githubassets.com/images/search-key-slash.svg" alt="" class="mr-2 header-search-key-slash">  
  
 <div class="Box position-absolute overflow-hidden d-none jump-to-suggestions js-jump-to-suggestions-container">

<svg height="16" width="16" class="octicon octicon-repo flex-shrink-0 js-jump-to-octicon-repo d-none" title="Repository" aria-label="Repository" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M2 2.5A2.5 2.5 0 014.5 0h8.75a.75.75 0 01.75.75v12.5a.75.75 0 01-.75.75h-2.5a.75.75 0 110-1.5h1.75v-2h-8a1 1 0 00-.714 1.7.75.75 0 01-1.072 1.05A2.495 2.495 0 012 11.5v-9zm10.5-1V9h-8c-.356 0-.694.074-1 .208V2.5a1 1 0 011-1h8zM5 12.25v3.25a.25.25 0 00.4.2l1.45-1.087a.25.25 0 01.3 0L8.6 15.7a.25.25 0 00.4-.2v-3.25a.25.25 0 00-.25-.25h-3.5a.25.25 0 00-.25.25z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-project flex-shrink-0 js-jump-to-octicon-project d-none" title="Project" aria-label="Project" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M1.75 0A1.75 1.75 0 000 1.75v12.5C0 15.216.784 16 1.75 16h12.5A1.75 1.75 0 0016 14.25V1.75A1.75 1.75 0 0014.25 0H1.75zM1.5 1.75a.25.25 0 01.25-.25h12.5a.25.25 0 01.25.25v12.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25V1.75zM11.75 3a.75.75 0 00-.75.75v7.5a.75.75 0 001.5 0v-7.5a.75.75 0 00-.75-.75zm-8.25.75a.75.75 0 011.5 0v5.5a.75.75 0 01-1.5 0v-5.5zM8 3a.75.75 0 00-.75.75v3.5a.75.75 0 001.5 0v-3.5A.75.75 0 008 3z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-search flex-shrink-0 js-jump-to-octicon-search d-none" title="Search" aria-label="Search" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M11.5 7a4.499 4.499 0 11-8.998 0A4.499 4.499 0 0111.5 7zm-.82 4.74a6 6 0 111.06-1.06l3.04 3.04a.75.75 0 11-1.06 1.06l-3.04-3.04z"></path></svg>  
</div>  
  
<img class="avatar mr-2 flex-shrink-0 js-jump-to-suggestion-avatar d-none" alt="" aria-label="Team" src="" width="28" height="28">  
  
<div class="jump-to-suggestion-name js-jump-to-suggestion-name flex-auto overflow-hidden text-left no-wrap css-truncate css-truncate-target">  
</div>  
  
<div class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none js-jump-to-badge-search">  
 <span class="js-jump-to-badge-search-text-default d-none" aria-label="in this repository">  
 In this repository  
 </span>  
 <span class="js-jump-to-badge-search-text-global d-none" aria-label="in all of GitHub">  
 All GitHub  
 </span>  
 <span aria-hidden="true" class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>  
  
<div aria-hidden="true" class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none d-on-nav-focus js-jump-to-badge-jump">  
 Jump to  
 <span class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>

No suggested jump to results

<svg height="16" width="16" class="octicon octicon-repo flex-shrink-0 js-jump-to-octicon-repo d-none" title="Repository" aria-label="Repository" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M2 2.5A2.5 2.5 0 014.5 0h8.75a.75.75 0 01.75.75v12.5a.75.75 0 01-.75.75h-2.5a.75.75 0 110-1.5h1.75v-2h-8a1 1 0 00-.714 1.7.75.75 0 01-1.072 1.05A2.495 2.495 0 012 11.5v-9zm10.5-1V9h-8c-.356 0-.694.074-1 .208V2.5a1 1 0 011-1h8zM5 12.25v3.25a.25.25 0 00.4.2l1.45-1.087a.25.25 0 01.3 0L8.6 15.7a.25.25 0 00.4-.2v-3.25a.25.25 0 00-.25-.25h-3.5a.25.25 0 00-.25.25z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-project flex-shrink-0 js-jump-to-octicon-project d-none" title="Project" aria-label="Project" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M1.75 0A1.75 1.75 0 000 1.75v12.5C0 15.216.784 16 1.75 16h12.5A1.75 1.75 0 0016 14.25V1.75A1.75 1.75 0 0014.25 0H1.75zM1.5 1.75a.25.25 0 01.25-.25h12.5a.25.25 0 01.25.25v12.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25V1.75zM11.75 3a.75.75 0 00-.75.75v7.5a.75.75 0 001.5 0v-7.5a.75.75 0 00-.75-.75zm-8.25.75a.75.75 0 011.5 0v5.5a.75.75 0 01-1.5 0v-5.5zM8 3a.75.75 0 00-.75.75v3.5a.75.75 0 001.5 0v-3.5A.75.75 0 008 3z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-search flex-shrink-0 js-jump-to-octicon-search d-none" title="Search" aria-label="Search" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M11.5 7a4.499 4.499 0 11-8.998 0A4.499 4.499 0 0111.5 7zm-.82 4.74a6 6 0 111.06-1.06l3.04 3.04a.75.75 0 11-1.06 1.06l-3.04-3.04z"></path></svg>  
</div>  
  
<img class="avatar mr-2 flex-shrink-0 js-jump-to-suggestion-avatar d-none" alt="" aria-label="Team" src="" width="28" height="28">  
  
<div class="jump-to-suggestion-name js-jump-to-suggestion-name flex-auto overflow-hidden text-left no-wrap css-truncate css-truncate-target">  
</div>  
  
<div class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none js-jump-to-badge-search">  
 <span class="js-jump-to-badge-search-text-default d-none" aria-label="in this repository">  
 In this repository  
 </span>  
 <span class="js-jump-to-badge-search-text-global d-none" aria-label="in all of GitHub">  
 All GitHub  
 </span>  
 <span aria-hidden="true" class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>  
  
<div aria-hidden="true" class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none d-on-nav-focus js-jump-to-badge-jump">  
 Jump to  
 <span class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>

<svg height="16" width="16" class="octicon octicon-repo flex-shrink-0 js-jump-to-octicon-repo d-none" title="Repository" aria-label="Repository" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M2 2.5A2.5 2.5 0 014.5 0h8.75a.75.75 0 01.75.75v12.5a.75.75 0 01-.75.75h-2.5a.75.75 0 110-1.5h1.75v-2h-8a1 1 0 00-.714 1.7.75.75 0 01-1.072 1.05A2.495 2.495 0 012 11.5v-9zm10.5-1V9h-8c-.356 0-.694.074-1 .208V2.5a1 1 0 011-1h8zM5 12.25v3.25a.25.25 0 00.4.2l1.45-1.087a.25.25 0 01.3 0L8.6 15.7a.25.25 0 00.4-.2v-3.25a.25.25 0 00-.25-.25h-3.5a.25.25 0 00-.25.25z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-project flex-shrink-0 js-jump-to-octicon-project d-none" title="Project" aria-label="Project" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M1.75 0A1.75 1.75 0 000 1.75v12.5C0 15.216.784 16 1.75 16h12.5A1.75 1.75 0 0016 14.25V1.75A1.75 1.75 0 0014.25 0H1.75zM1.5 1.75a.25.25 0 01.25-.25h12.5a.25.25 0 01.25.25v12.5a.25.25 0 01-.25.25H1.75a.25.25 0 01-.25-.25V1.75zM11.75 3a.75.75 0 00-.75.75v7.5a.75.75 0 001.5 0v-7.5a.75.75 0 00-.75-.75zm-8.25.75a.75.75 0 011.5 0v5.5a.75.75 0 01-1.5 0v-5.5zM8 3a.75.75 0 00-.75.75v3.5a.75.75 0 001.5 0v-3.5A.75.75 0 008 3z"></path></svg>  
 <svg height="16" width="16" class="octicon octicon-search flex-shrink-0 js-jump-to-octicon-search d-none" title="Search" aria-label="Search" viewBox="0 0 16 16" version="1.1" role="img"><path fill-rule="evenodd" d="M11.5 7a4.499 4.499 0 11-8.998 0A4.499 4.499 0 0111.5 7zm-.82 4.74a6 6 0 111.06-1.06l3.04 3.04a.75.75 0 11-1.06 1.06l-3.04-3.04z"></path></svg>  
</div>  
  
<img class="avatar mr-2 flex-shrink-0 js-jump-to-suggestion-avatar d-none" alt="" aria-label="Team" src="" width="28" height="28">  
  
<div class="jump-to-suggestion-name js-jump-to-suggestion-name flex-auto overflow-hidden text-left no-wrap css-truncate css-truncate-target">  
</div>  
  
<div class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none js-jump-to-badge-search">  
 <span class="js-jump-to-badge-search-text-default d-none" aria-label="in this repository">  
 In this repository  
 </span>  
 <span class="js-jump-to-badge-search-text-global d-none" aria-label="in all of GitHub">  
 All GitHub  
 </span>  
 <span aria-hidden="true" class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>  
  
<div aria-hidden="true" class="border rounded-1 flex-shrink-0 bg-gray px-1 text-gray-light ml-1 f6 d-none d-on-nav-focus js-jump-to-badge-jump">  
 Jump to  
 <span class="d-inline-block ml-1 v-align-middle">↵</span>  
</div>

</div>  
 </label>

</div>  
  
 <a href="/login?return\_to=%2Flijenn%2Fteampsdprototype%2Fblob%2Fgh-pages%2Fchapter\_7\_glossary.md"  
 class="HeaderMenu-link no-underline mr-3"  
 data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;site header menu&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/chapter\_7\_glossary.md&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="56ea740849a9ccdc5c28b91d8c7bf5fff3b8601980800a06561633291a30eea6"  
 data-ga-click="(Logged out) Header, clicked Sign in, text:sign-in">  
 Sign&nbsp;in  
 </a>  
 <a href="/join?ref\_cta=Sign+up&amp;ref\_loc=header+logged+out&amp;ref\_page=%2F%3Cuser-name%3E%2F%3Crepo-name%3E%2Fblob%2Fshow&amp;source=header-repo&amp;source\_repo=lijenn%2Fteampsdprototype"  
 class="HeaderMenu-link d-inline-block no-underline border border-gray-dark rounded-1 px-2 py-1"  
 data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;site header menu&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/chapter\_7\_glossary.md&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="56ea740849a9ccdc5c28b91d8c7bf5fff3b8601980800a06561633291a30eea6"  
 data-ga-click="Sign up, click to sign up for account, ref\_page:/&lt;user-name&gt;/&lt;repo-name&gt;/blob/show;ref\_cta:Sign up;ref\_loc:header logged out">  
 Sign&nbsp;up  
 </a>  
 </div>  
</div>

<button class="flash-close js-flash-close" type="button" aria-label="Dismiss this message">  
 <svg class="octicon octicon-x" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M3.72 3.72a.75.75 0 011.06 0L8 6.94l3.22-3.22a.75.75 0 111.06 1.06L9.06 8l3.22 3.22a.75.75 0 11-1.06 1.06L8 9.06l-3.22 3.22a.75.75 0 01-1.06-1.06L6.94 8 3.72 4.78a.75.75 0 010-1.06z"></path></svg>  
</button>  
  
 <div class="js-flash-template-message"></div>

<div itemscope itemtype="http://schema.org/SoftwareSourceCode" class="">  
<main >

<div class="d-flex mb-3 px-3 px-md-4 px-lg-5">  
  
 <div class="flex-auto min-width-0 width-fit mr-3">  
 <h1 class=" d-flex flex-wrap flex-items-center break-word f3 text-normal">  
<svg class="octicon octicon-repo-forked text-gray" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M5 3.25a.75.75 0 11-1.5 0 .75.75 0 011.5 0zm0 2.122a2.25 2.25 0 10-1.5 0v.878A2.25 2.25 0 005.75 8.5h1.5v2.128a2.251 2.251 0 101.5 0V8.5h1.5a2.25 2.25 0 002.25-2.25v-.878a2.25 2.25 0 10-1.5 0v.878a.75.75 0 01-.75.75h-4.5A.75.75 0 015 6.25v-.878zm3.75 7.378a.75.75 0 11-1.5 0 .75.75 0 011.5 0zm3-8.75a.75.75 0 100-1.5.75.75 0 000 1.5z"></path></svg>

lijenn / teampsdprototype

forked from lzim/teampsd

</div>  
  
 <ul class="pagehead-actions flex-shrink-0 d-none d-md-inline" style="padding: 2px 0;">

Watch 0

Star 0

Fork 21

Code

Issues 0

Pull requests 1

Actions

Projects 0

Security

Insights

<details class="details-overlay details-reset position-relative">

<svg class="octicon octicon-kebab-horizontal" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path d="M8 9a1.5 1.5 0 100-3 1.5 1.5 0 000 3zM1.5 9a1.5 1.5 0 100-3 1.5 1.5 0 000 3zm13 0a1.5 1.5 0 100-3 1.5 1.5 0 000 3z"></path></svg>  
 <span class="sr-only">More</span>  
 </div>

<ul>  
 <li data-menu-item="code-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/tree/gh-pages" href="/lijenn/teampsdprototype/tree/gh-pages">  
 Code

<li data-menu-item="issues-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/issues" href="/lijenn/teampsdprototype/issues">  
 Issues

<li data-menu-item="pull-requests-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/pulls" href="/lijenn/teampsdprototype/pulls">  
 Pull requests

<li data-menu-item="actions-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/actions" href="/lijenn/teampsdprototype/actions">  
 Actions

<li data-menu-item="projects-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/projects" href="/lijenn/teampsdprototype/projects">  
 Projects

<li data-menu-item="security-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/security" href="/lijenn/teampsdprototype/security">  
 Security

<li data-menu-item="insights-tab" hidden>  
 <a role="menuitem" class="js-selected-navigation-item dropdown-item" data-selected-links=" /lijenn/teampsdprototype/pulse" href="/lijenn/teampsdprototype/pulse">  
 Insights

</ul>

<a class="d-none js-permalink-shortcut" data-hotkey="y" href="/lijenn/teampsdprototype/blob/c5a23fb5eb8c43770c31eae03830b26bb7beb932/chapter\_7\_glossary.md">Permalink</a>  
  
<!-- blob contrib key: blob\_contributors:v22:0d4ca71e02745c847dafea7175059aa5 -->  
 <signup-prompt class="signup-prompt-bg rounded-1" data-prompt="signup" hidden>  
<div class="signup-prompt p-4 text-center mb-4 rounded-1">  
 <div class="position-relative">  
 <button  
 type="button"  
 class="position-absolute top-0 right-0 btn-link link-gray"  
 data-action="click:signup-prompt#dismiss"  
 data-ga-click="(Logged out) Sign up prompt, clicked Dismiss, text:dismiss"  
 >  
 Dismiss  
 </button>  
 <h3 class="pt-2">Join GitHub today</h3>  
 <p class="col-6 mx-auto">GitHub is home to over 50 million developers working together to host and review code, manage projects, and build software together.</p>  
 <a class="btn btn-primary" data-ga-click="(Logged out) Sign up prompt, clicked Sign up, text:sign-up" data-hydro-click="{&quot;event\_type&quot;:&quot;authentication.click&quot;,&quot;payload&quot;:{&quot;location\_in\_page&quot;:&quot;files signup prompt&quot;,&quot;repository\_id&quot;:null,&quot;auth\_type&quot;:&quot;SIGN\_UP&quot;,&quot;originating\_url&quot;:&quot;https://github.com/lijenn/teampsdprototype/blob/gh-pages/chapter\_7\_glossary.md&quot;,&quot;user\_id&quot;:null}}" data-hydro-click-hmac="a2947978efc5bd03a25fc563263230ae83b5447f80826d7a35450aaaff3af6a0" href="/join?source=prompt-blob-show&amp;source\_repo=lijenn%2Fteampsdprototype">Sign up</a>  
 </div>  
</div>

<div class="d-flex flex-items-start flex-shrink-0 pb-3 flex-wrap flex-md-nowrap flex-justify-between flex-md-justify-start">

gh-pages

<include-fragment class="SelectMenu-loading" aria-label="Menu is loading">  
 <svg class="octicon octicon-octoface anim-pulse" height="32" viewBox="0 0 16 16" version="1.1" width="32" aria-hidden="true"><path fill-rule="evenodd" d="M14.7 5.34c.13-.32.55-1.59-.13-3.31 0 0-1.05-.33-3.44 1.3-1-.28-2.07-.32-3.13-.32s-2.13.04-3.13.32c-2.39-1.64-3.44-1.3-3.44-1.3-.68 1.72-.26 2.99-.13 3.31C.49 6.21 0 7.33 0 8.69 0 13.84 3.33 15 7.98 15S16 13.84 16 8.69c0-1.36-.49-2.48-1.3-3.35zM8 14.02c-3.3 0-5.98-.15-5.98-3.35 0-.76.38-1.48 1.02-2.07 1.07-.98 2.9-.46 4.96-.46 2.07 0 3.88-.52 4.96.46.65.59 1.02 1.3 1.02 2.07 0 3.19-2.68 3.35-5.98 3.35zM5.49 9.01c-.66 0-1.2.8-1.2 1.78s.54 1.79 1.2 1.79c.66 0 1.2-.8 1.2-1.79s-.54-1.78-1.2-1.78zm5.02 0c-.66 0-1.2.79-1.2 1.78s.54 1.79 1.2 1.79c.66 0 1.2-.8 1.2-1.79s-.53-1.78-1.2-1.78z"></path></svg>  
 </include-fragment>  
</div>

<h2 id="blob-path" class="breadcrumb flex-auto min-width-0 text-normal mx-0 mx-md-3 width-full width-md-auto flex-order-1 flex-md-order-none mt-3 mt-md-0">  
 <span class="js-repo-root text-bold"><span class="js-path-segment d-inline-block wb-break-all"><a data-pjax="true" href="/lijenn/teampsdprototype/tree/gh-pages"><span>teampsdprototype</span></a></span></span><span class="separator">/</span><strong class="final-path">chapter\_7\_glossary.md</strong>  
 </h2>  
 <a href="/lijenn/teampsdprototype/find/gh-pages"  
 class="js-pjax-capture-input btn mr-2 d-none d-md-block"  
 data-pjax  
 data-hotkey="t">  
 Go to file  
 </a>  
  
 <details class="details-overlay details-reset position-relative" id="blob-more-options-details">

Go to file T

Go to line L

Copy path

<div class="d-flex flex-items-center">  
 <span class="flex-shrink-0 ml-n1 mr-n1 mt-n1 mb-n1">  
 <a rel="author" data-skip-pjax="true" data-hovercard-type="user" data-hovercard-url="/users/lijenn/hovercard" data-octo-click="hovercard-link-click" data-octo-dimensions="link\_type:self" href="/lijenn"><img class="avatar avatar-user" src="https://avatars0.githubusercontent.com/u/59668647?s=48&amp;v=4" width="24" height="24" alt="@lijenn" /></a>  
 </span>  
 <div class="flex-1 d-flex flex-items-center ml-3 min-width-0">  
 <div class="css-truncate css-truncate-overflow">  
 <a class="text-bold link-gray-dark" rel="author" data-hovercard-type="user" data-hovercard-url="/users/lijenn/hovercard" data-octo-click="hovercard-link-click" data-octo-dimensions="link\_type:self" href="/lijenn">lijenn</a>  
  
 <span>  
 <a data-pjax="true" title="Update chapter\_7\_glossary.md" class="link-gray" href="/lijenn/teampsdprototype/commit/8d41738f619022121ee167fa73fd9fa33156597d">Update chapter\_7\_glossary.md</a>  
 </span>  
 </div>  
  
  
 <span class="ml-2">  
 <include-fragment accept="text/fragment+html" src="/lijenn/teampsdprototype/commit/8d41738f619022121ee167fa73fd9fa33156597d/rollup?direction=e" class="d-inline"></include-fragment>  
 </span>  
 </div>  
 <div class="ml-3 d-flex flex-shrink-0 flex-items-center flex-justify-end text-gray no-wrap">  
 <span class="d-none d-md-inline">  
 <span>Latest commit</span>  
 <a class="text-small text-mono link-gray" href="/lijenn/teampsdprototype/commit/8d41738f619022121ee167fa73fd9fa33156597d" data-pjax>8d41738</a>  
 <span itemprop="dateModified"><relative-time datetime="2020-08-05T18:01:31Z" class="no-wrap">Aug 5, 2020</relative-time></span>  
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Terms

@ Mentions: to notify a person on GitHub by using @ before their username. Users in an organization on GitHub can also be a part of a team that can be mentioned.

App: Allows you to automate and improve the GitHub workflow. Team PSD can use apps to automate simple tasks and enforce standards. Application Programming Interface (API): We use APIs as a call to send data from our GitHub repository to GitHub Apps and Actions.

Assignee: The member that is assigned to an issue or feature card.

Branches: A branch is a parallel version of a GitHub repository. It is contained within the repository, but does not affect the primary or master branch allowing you to work freely without disrupting the “live” version. When you’ve made the changes you want to make, you can merge your branch back into the master branch to publish your changes.

Bug: An existing feature that has been developed and is not working correctly and should be documented in an issue card on GitHub to be resolved.

Card: A movable square within an associated and contain documentation for Issue tasks, Bugs, Features, or Pull Requests. You may see issue cards on GitHub Kanban Trackers and on the ZenHub Workspace Board.

Code of conduct: A document that defines standards for how to engage in a community on GitHub.

Comment: Add comments within GitHub issue cards to keep discussion going all within context.

Compare branch: The branch you use to create a pull request in GitHub. This branch is compared to the base branch you choose for the pull request, and the changes are identified. When the pull request is merged, the base branch is updated with the changes from the compare branch. Also known as the “head branch” of the pull request.

Concurrent Screencast Video: Screencasted videos allows for asynchronous feedback to be provided. These videos consist of users going through the MVP without audio to concurrently focus on the task of seeing/trying out the MVP and whether or not it addresses their user-centered hypotheses and pain points. Videos should be uploaded on the LZPhD YouTube channel.

Continuous Deployment (CD): Automatic releases to a test or production environment if all the tests from the Continuous Integration (See Continuous Integration) process pass.

Continuous Integration (CI): Practice of integrating changes “continuously”, coupled with automated testing to allow for a function and always up-to-date repository base.

Continuous Learning: The Continuous Learning Culture competency describes a set of values and practices that encourage individuals—and the enterprise as a whole—to continually increase knowledge, competence, performance, and innovation.

Community of Practice (COP): Communities of Practice (CoPs) are organized groups of people who have a common interest in a specific technical or business domain. They collaborate regularly to share information, improve their skills, and actively work on advancing the general knowledge of the domain.

Deliverable: A product of a task or group of tasks.

Design Thinking Process: Design Thinking is a customer-centric development process that creates desirable products that are profitable and sustainable over their lifecycle. The Process consists of Emphasizing, Defining, Ideating, Prototyping, and Testing (see Team PSD 2.0 Monthly Process).

Dependency (Blocking/blockers): Use a blocking/blocker to add a dependency on your GitHub issue card to alert others that a task cannot be done without another task or vice versa.

Documentation: Materials or descriptions that provide information about a topic. The team uses documentation to ensure that our work is transparent, reproducible, and understandable for both team members and external partners.

Epic: Epics are ~1 month’s worth of sprints that go by the week. Each month is a new epic (e.g In August, our Epic is aug\_epic).

Estimate: Points following the Fibonacci sequence to describe the level of effort, not hours, required to complete an issue or feature. We can think of these as t-shirt sizes:

Expedite: To move the priority of a bug or feature in GitHub to the top of a queue. Expediting is poison to a production system and should be used only in exigent circumstances.

Feature: A characteristic, attribute or topic that requires work breakdown, research, design, development and testing. Features can be tagged as “fast\_track” in order to expedite its design and development. The features documentation of requirements will be in a GitHub Feature card and placed in the appropriate feature\_tracker column.

Fork: A fork is a personal copy of another user’s GitHub repository that lives on your account. Forks allow you to freely make changes to a project without affecting the original upstream repository. You can also open a pull request in the upstream repository and keep your fork synced with the latest changes since both repositories are still connected.

Git: Git is an open source program for tracking changes in text files. It was written by the author of the Linux operating system, and is the core technology that GitHub, the social and user interface, is built on top of.

GitHub: Team PSD’s main platform to track work from each Team PSD Workflow (Research, Operations, and Modeling to Learn) based on GitHub repositories.

GitHub Actions: GitHub Actions help automate repository workflows and tasks on GitHub. You can write individual tasks, called actions, and combine them to create a custom workflow. Workflows are custom automated processes that you can set up in your repository to build, test, package, release, or deploy any project on GitHub.

Issue: Issues are an important tasks or problems to be worked on and may be discussed with others to resolve and close in a GitHub Issue card.

Labels: A tag in GitHub that is affixed by an originator or workgroup as a means to identify the task holders for a specific issue. Workgroup leads can filter by labels in the tracker to sort for their specific workgroup or other workgroups’ Kanban cards in the search bar found in the upper right-hand corner of each tracker (below). To use the filter function, use the code “label:labelname” i.e. “label:facilitate” or “label:sim\_ui”. (You can use this function with other sort options as well i.e. author:lzim, etc.). In most cases, an issue should only have 1 label at any given time.

LucidCharts: Platform that enables the creation of charts and flows. The team uses LucidCharts for pictorial documentation.

Markdown (language and file format): Markdown is an incredibly simple semantic file format, not too dissimilar from .doc, .rtf and .txt. Markdown makes it easy for even those without a web-publishing background to write prose (including with links, lists, bullets, etc.) and have it displayed like a website. GitHub supports Markdown and uses a particular form of Markdown called GitHub Flavored Markdown.

Master Card: GitHub Master Cards typically do not have an Assignee, Milestone, Estimate, (with the exception of some Manuscript cards for the PI) as their purpose is to document and track all related issue task cards and/or requirements. These cards usually live in their respective Kanban Tracker and/or ZenHub pipeline.

Master Document Card: The Master Document Card is a tracking card on GitHub that tracks all of an Issue task’s requirements and multiple Issue task cards related to 1 big Issue that had to be broken down into small tasks. Master Document Cards flows through the document\_tracker Kanban and open\_documents ZenHub pipeline.

Master Feature Card: The Master Feature Card is a tracking card on GitHub that tracks a customer requirement through design to testing. It defines a customer’s requirement, design features that support the requirement and test criteria that demonstrate the design criteria meets the customer requirement. Master Feature Cards flows through the feature\_tracker Kanban and open\_features ZenHub pipeline.

Master Manuscript Card: The Master Manuscript Card is a tracking card on GitHub that tracks all of an Manuscript related Issue task’s requirements and multiple Issue task cards related to 1 big Manuscript Issue that had to be broken down into small tasks. Master Manuscript Cards flows through the manuscript\_tracker Kanban and open\_manuscripts ZenHub pipeline.

Merge: Merging takes the changes from one branch (in the same GitHub repository or from a fork), and applies them into another on GitHub. This often happens as a “pull request” (which can be thought of as a request to merge), or via the command line. A merge can be done through a pull request via the GitHub.com web interface if there are no conflicting changes, or can always be done via the command line.

Merge conflict: A difference that occurs between merged branches on GitHub. Merge conflicts happen when people make different changes to the same line of the same file, or when one person edits a file and another person deletes the same file. The merge conflict must be resolved before you can merge the branches.

Milestone: Milestones are the monthly workgroup sprints, in which each workgroup tries to accomplish their monthly milestone goals for the monthly epic.

Minimum Viable Product (MVP): A new/revised product that attempts to address a user or user groups pain points and needs (See User-Centered Hypotheses). The MVP should follow the 80/20 Pareto Principle (created with the least amount/20% of effort but solves majority/80% of pain points/needs).

Persona: A description that is used to represent a user or a user groups’ needs and pain points (see User-Centered Hypotheses) with specific skills, goals, attittudes, and the background of the user to account for while creating and prototyping an MVP.

Principles: Rules or beliefs that may be in service of multiple key Values.

Project (Kanban Tracker Board): A board that contains issue cards and is used to communicate the status and priority of bugs, features, documentation, & manuscripts as they move through the production process. There are four Kanban to manage production in the Team PSD are: bug\_tracker, feature\_tracker, document\_tracker, and manuscript\_tracker.

Prototyping: Occurs during Week 2 of the Team PSD 2.0 Monthly Process, prototyping is to build or create a final product or MVP (see Minimum Viable Product) as a way to understand what it should do, how it should be interacted, and see how the product or MVP will look like before completion. The user or user groups’ pain points should be taken into account of while prototyping (see User-Centered Hypotheses).

Pull request: Pull requests are proposed changes to a GitHub repository submitted by a user and accepted or rejected by a repository’s collaborators. Like issues, pull requests each have their own discussion forum.

Pull request review: Comments from collaborators on a GitHub pull request that approve the changes or request further changes before the pull request is merged.

Readme: A GitHub text file containing information about the files in a repository that is typically the first file a visitor to your repository will see. A README file, along with a repository license, contribution guidelines, and a code of conduct, helps you share expectations and manage contributions to your project.

Refactoring: Refactoring is needed when we have to make upgrades over time and/or prepare for new, incoming features. Refactoring requires internal changes, without effecting external behavior.

Release: GitHub issues that are grouped into a key team release.

Repository: A repository is the most basic element of GitHub. They’re easiest to imagine as a project’s folder. A repository contains all of the project files (including documentation), and stores each file’s revision history. Repositories can have multiple collaborators and can be either public or private.

Repository (Private): Private GitHub repositories are only visible to the repository owner and collaborators that the owner specified.

Retrospective Verbal: A retrospective verbal is a written out set of feedback and response after the user finishes testing and looking through an MVP and thinking about whether or not the MVP addressed their user-centered hypotheses and pain points.

Second Story Perspectives: A retrospective look during Week 4 of the Team PSD 2.0 Monthly Spring to discuss what happened in the Epic, the results of the Iteration, review their practices, and identify ways to improve for the next Epic.

Task: A cognitive or kinetic behavior that consumes time. A task or group of tasks are necessary to create an outcome or deliverable.

Team PSD 2.0 Monthly Process: The 2.0 Monthly Process for Epics/Milestones follows the design thinking process based on concepts from user experience to scale and make Team PSD’s workflow become asynchronous to better support the needs and pain points (See User-Centered Hypotheses) of a user with a product that can also be integrated by the end of the month for the team to use. The Monthly Process goes by weeks.

Week 1: Gather user-centered hypotheses

Week 2: Clarify user assumptions w/ Minimum Viable Product (MVP) test

Week 3: Review results of user persona testing of your MVP Prototype (with concurrent video and retrospective verbal)

Week 4: Review user persona artifacts and second story perspectives mindfully and empathically to discover new understandings you might have missed or still need to learn

Team PSD Workflows: Team PSD has 3 workflows: Research, Operations, and Modeling to Learn.

Think Aloud Protocols: These user testing protocols typically involve participants thinking aloud as they are performing a set of specified tasks. Participants are asked to say whatever comes into their mind as they complete the task. This might include what they are looking at, thinking, doing, and feeling. Team PSD does a combination of a concurrent and retrospective think aloud protocol (see Concurrent Screencast Video and Retrospective Verbal).

User Experience: A person’s emotions and attitudes about using a particular product, system/workflow or service. The Team PSD 2.0 Process is based on the foundation of the user’s experience to ensure Products integrated by the end of the monthly Epic address the person’s emotions, attitudes, pain points, and needs.

User Testing: Occurs during Week 3 of the Team PSD 2.0 Process, user testing is the process through which the MVP is tested by the targeted users who perform specific and realistic tasks using the MVP.

User-Centered Hypotheses: Gathered in Week 1 of the Team PSD 2.0 Process, these are the pain point and needs of a user that is struggling in either a task or parts of the workflow within Team PSD’s Operations, Research, and/or Modeling to Learn pipeline. The pain points and needs should be turned into hypotheses that can be tested and reiterated throughout the Team PSD 2.0 Monthly Process cycle to address and resolve the pain points and needs of a user/user group.

Values: Virtues that govern the team’s principles. Values can be in conflict with Principles, especially when it comes to applying Values in any given action.

YAML Ain’t Markup Language (YAML or YML): Data serialization language that is used to set configurations for other applications to read and have information about the document/script. YAML will be used by the team to setup App configurations and in our documentation to enable transfers between other documents. GitHub Action workflow files use .YML files.

ZenHub: A Google Chrome extension that allows agile project management within GitHub.

ZenHub 9 clicks: Every issue card must be in a pipeline, have an assignee, labeled, added dependencies, added to a tracker (if applicable), milestone, epic, estimated with points, in an epic and/or project (if applicable), within a release (if applicable), and associated with pull requests (if necessary).

ZenHub Pipelines: Pipelines are columns within the overall ZenHub Board to show where Issues belong in which pipeline, allowing for a clear and consistent flow of Issues across the Board. You can click on the light grey (i) icon within each pipeline to see the description.

Acronyms

AAHRPP: Association for the Accreditation of Human Research Protection Program ACCME: Accreditation Council for Continuing Medical Education ACORP: Animal Component of Research Protocol ADPAC: Automated Data Processing Application Coordinator ANCC: American Nurses Credentialing Center APA: American Psychological Association ASWB: Association of Social Work Boards ATS: Addiction Treatment Services AUD: Alcohol Use Disorder BHIP: Behavioral Health Integration Project BISL: Business Intelligence Service Line CBOC: Community Based Outpatient Clinic CC: Care Coordination CFIR: Consolidated Framework for Implementation Research CHCE: Center for Health Care Evaluation CPRS: Computerized Patient Record System CPT Code: Current Procedural Terminology CRADA: Cooperative Research and Development Agreement CSP: Cooperative Studies Program CTR3: Center for Tissue Regeneration, Rehabilitation, and Repair CWT: Comprehensive Work Therapy DEA: Drug Enforcement Agency DHHS: Department of Health & Human Services EBP: Evidence-Based Practices EBPharm: Evidence-Based Pharmacotherapy EBPsy: Evidence-Based Psychotherapy EES: Employee Education Services F&A Rate: Facilities & Administrative Rate FAR: Federal Acquisition Regulations FTE: Full Time Equivalent GHPC: Georgia Health Policy Center GRECC: Geriatric Research, Education and Clinical Center HERC: Health Economics Resource Center HSR&D: Health Services Research and Development Services IACUC: Institutional Animal Care and Use Committee INAPS: International Association of Peer Supporters IOP: Intensive Outpatient Program IPA: Intergovernmental Personnel Act IRB: Institutional Review Board JPA: Joint Personnel Agreement LD: Livermore Division MAT: Medication Assisted Therapy MHICM: Mental Health Intensive Case Management MHTC: Mental Health Treatment Coordinators MIRECC: Mental Illness Research, Education, and Clinical Center MM: Medication Management MPD: Menlo Park Division NAVREF: National Association of Veteran’s Research and Education Foundations NBCC: National Board for Certified Counselors NCPTSD-DT: National Center for Posttraumatic Stress Disorder, Dissemination & Training NIH: National Institutes of Health OGC: Office of General Counsel OMB: Office of Management & Budget OMHO: Office of Mental Health Operations (now OMHSP) OMHSP: Office of Mental Health & Suicide Prevention (previously OMHO) OPM: Office of Personnel Management ORO: Office of Research Oversight OUD: Opioid Use Disorder PAD: Palo Alto Division PAIRE: Palo Alto Institute for Research and Education, Inc. PAVIR: Palo Alto Veterans Institute for Research PCP: Primary Care PHysician PCT: PTSD Clinical Team PE: Prolonged Exposure PERC: Program Evaluation and Resource Center PHI: Protected Health Information PI: Prinicipal Investigator PSA: Personal Services Agreement PSD: Participatory System Dynamics QI: Quality Improvement QIIC: Quality Improvement Implementation Consultant R&DC: Research and Development Committee RDIS: Research and Development Information System rJPA: Reverse Joint Personnel Agreement SAIL: Strategic Analytics for Improvement and Learning Sankey: A type of flow diagram where the width of the arrows are proportional to the flow quantity “Say File”: GitHub file for the facilitators to read from “See File”: GitHub file for learners to look at at SME: Subject Matter Expert SMI: Serious Mental Illness SRC: Scientific Review Committee SRS: Subcommittee on Research Safety SU: Stanford University SUD: Substance Use Disorder UI: User Interface VA: Veterans Affairs VAPAHCS: Veterans Affairs Palo Alto Health Care System VAPOR: Veterans Advisory Partnership for Operations and Research VERC: Veterans Engineering Resource Center VHA: Veterans Health Administration VISN: Veterans Integrated Service Network VISTA: Veterans Health Information Systems and Technology Architecture WCC: Women’s Counseling Center WRIISC: War Related Illness & Injury Study Center WRVU: Work Relative Value Unit X Waiver: Needed to prescribe buprenorphine; must complete training and still limits # of patients per physician that can receive bup

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</ul>  
  
<a aria-label="Homepage" title="GitHub" class="footer-octicon d-none d-lg-block mx-lg-4" href="https://github.com">  
 <svg height="24" class="octicon octicon-mark-github" viewBox="0 0 16 16" version="1.1" width="24" aria-hidden="true"><path fill-rule="evenodd" d="M8 0C3.58 0 0 3.58 0 8c0 3.54 2.29 6.53 5.47 7.59.4.07.55-.17.55-.38 0-.19-.01-.82-.01-1.49-2.01.37-2.53-.49-2.69-.94-.09-.23-.48-.94-.82-1.13-.28-.15-.68-.52-.01-.53.63-.01 1.08.58 1.23.82.72 1.21 1.87.87 2.33.66.07-.52.28-.87.51-1.07-1.78-.2-3.64-.89-3.64-3.95 0-.87.31-1.59.82-2.15-.08-.2-.36-1.02.08-2.12 0 0 .67-.21 2.2.82.64-.18 1.32-.27 2-.27.68 0 1.36.09 2 .27 1.53-1.04 2.2-.82 2.2-.82.44 1.1.16 1.92.08 2.12.51.56.82 1.27.82 2.15 0 3.07-1.87 3.75-3.65 3.95.29.25.54.73.54 1.48 0 1.07-.01 1.93-.01 2.2 0 .21.15.46.55.38A8.013 8.013 0 0016 8c0-4.42-3.58-8-8-8z"></path></svg>

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<span class="f6 text-gray-light"></span>

<svg class="octicon octicon-alert" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M8.22 1.754a.25.25 0 00-.44 0L1.698 13.132a.25.25 0 00.22.368h12.164a.25.25 0 00.22-.368L8.22 1.754zm-1.763-.707c.659-1.234 2.427-1.234 3.086 0l6.082 11.378A1.75 1.75 0 0114.082 15H1.918a1.75 1.75 0 01-1.543-2.575L6.457 1.047zM9 11a1 1 0 11-2 0 1 1 0 012 0zm-.25-5.25a.75.75 0 00-1.5 0v2.5a.75.75 0 001.5 0v-2.5z"></path></svg>  
<button type="button" class="flash-close js-ajax-error-dismiss" aria-label="Dismiss error">  
 <svg class="octicon octicon-x" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M3.72 3.72a.75.75 0 011.06 0L8 6.94l3.22-3.22a.75.75 0 111.06 1.06L9.06 8l3.22 3.22a.75.75 0 11-1.06 1.06L8 9.06l-3.22 3.22a.75.75 0 01-1.06-1.06L6.94 8 3.72 4.78a.75.75 0 010-1.06z"></path></svg>  
</button>  
You can’t perform that action at this time.

<svg class="octicon octicon-alert" viewBox="0 0 16 16" version="1.1" width="16" height="16" aria-hidden="true"><path fill-rule="evenodd" d="M8.22 1.754a.25.25 0 00-.44 0L1.698 13.132a.25.25 0 00.22.368h12.164a.25.25 0 00.22-.368L8.22 1.754zm-1.763-.707c.659-1.234 2.427-1.234 3.086 0l6.082 11.378A1.75 1.75 0 0114.082 15H1.918a1.75 1.75 0 01-1.543-2.575L6.457 1.047zM9 11a1 1 0 11-2 0 1 1 0 012 0zm-.25-5.25a.75.75 0 00-1.5 0v2.5a.75.75 0 001.5 0v-2.5z"></path></svg>  
<span class="js-stale-session-flash-signed-in" hidden>You signed in with another tab or window. <a href="">Reload</a> to refresh your session.</span>  
<span class="js-stale-session-flash-signed-out" hidden>You signed out in another tab or window. <a href="">Reload</a> to refresh your session.</span>