



# SonarQube SAST Report

generated by Reflect Sonar


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SonarQube Project Name: juice-shop

<b>Security</b> <b>1</b> Open Issues	E	<b>Reliability</b> <b>46</b> Open Issues	C	<b>Maintainability</b> <b>452</b> Open Issues	A
<b>Accepted Issues</b> <b>0</b> <small>Valid issues that were not fixed</small>	C	<b>Coverage</b> <b>0.0%</b> <small>on 15106 lines to cover</small>	B	<b>Duplications</b> <b>11.4%</b> <small>on 68620 lines</small>	D
<b>Security Hotspots</b> <b>263</b> Open Issues					




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## Security Issues

Severity	File Path	Rule & Message
	lib/insecurity.ts (Line 23)	<b>S6706</b> Make sure this private key gets revoked, changed, and removed from the code.
<div> <div>■ Problematic Code:</div> <pre> 20: import * as z85 from 'z85' 21: 22: export const publicKey = fs ? fs.readFileSync('encryptionkeys/jwt.pub', 'utf8') : 'placeholder-public-key' &gt;&gt;&gt; 23: const privateKey = '-----BEGIN RSA PRIVATE KEY-----\r\nMIICXAIBAAKBgQDNWqLEe9wgTXCbC7+ RPdDbBbegjdbs4kOPOIGzqLpXvJXlxxW8iMz0EaM4BKUqYsIa+ndv3NAn2RxCd5ubVdJJcX43zO6Ko0TFEZX/65gY3BE006 syCEmUP4qbSd6exou/F+WTISzbQ5FBVPVmhYhG/kpwt/cIxK5iUn5hm+4tQIDAQABAOGBAI+8xiPoOrA+KMnG/T4jJsG6T sHQcDHvJi7o1IKC/hnIXha0atTX5AUkRRce95qSfvKFweXdJXSQ0JMGJyfuXgU6dI0TcseFRfewXAa/ssxAC+iUVR6KUMh1 PE2wXLitfeI6JLvVtrBYswm2I7CtY0q8n5AGimHWVXJPLfGV7m0BAkEA+fqt2LXbLtyg6wZyxMA/cnmt5Nt3U2dAu77MzF JvibANUNHE4HPLZxjGNXN+a6m0K6TD4kDdh5HfUYLWWRBYQJBANK3carmulBwqzcDBjsJ0YrIONBpCAsXxk8idXb8jL9aNI gl5Wumm2enqqObahDHB5jnGOLmbasizvSVqypfM9UCQCQ18xIqy+YgURXzXCn+kwUgHinrutZms87Jyi+D8Br8NY0+Nlf+z HvXAomD2W5CsEK7C+8SLBr3k/TsnRWHJuECQHFE9RA2OP8WoaLPuGCyFXaxzICThSRZYluVnWkZtxsBhW2W8z1b8PvWUE7k My7TnkzeJS2LSnaNHoyxi7IaPQUCQCwWU4U+v4lD7uYBw00Ga/xt+7+UqFP1Pvdzlyyr4q24Zxaw0LgmuEvgU5dycq8N7Jx jTubX0MIRR+G9fmDBB18=\r\n-----END RSA PRIVATE KEY-----' 24: 25: interface ResponseWithUser { 26:   status?: string </pre> </div>		

## Reliability Issues

Total: 46 issues (High: 2, Medium: 14, Low: 30)

Severity	File Path	Rule & Message
	data/datacache.ts (Line 33)	<b>S6861</b> Exporting mutable 'let' binding, use 'const' instead.
<b>■ Problematic Code:</b> <pre> 30: } 31: export const notifications: Notification[] = [] 32: &gt;&gt;&gt; 33: export let retrieveBlueprintChallengeFile: string   null = null 34: export function setRetrieveBlueprintChallengeFile (retrieveBlueprintChallengeFileArg: string) { 35:   retrieveBlueprintChallengeFile = retrieveBlueprintChallengeFileArg 36: }</pre>		
	routes/chatbot.ts (Line 25)	<b>S6861</b> Exporting mutable 'let' binding, use 'const' instead.
<b>■ Problematic Code:</b> <pre> 22: 23: let trainingFile = config.get&lt;string&gt;('application.chatBot.trainingData') 24: let testCommand: string &gt;&gt;&gt; 25: export let bot: Bot   null = null 26: 27: export async function initializeChatbot () { 28:   if (utils.isUrl(trainingFile)) {</pre>		
	frontend/src/app/score-board/components challenge-card challenge-card.component.scss (Line 143)	<b>S4656</b> Unexpected duplicate "color"
<b>■ Problematic Code:</b> <pre> 140: 141:   border-radius: calc(\$badge-size / 2); 142:   color: var(--theme-text) !important; &gt;&gt;&gt; 143:   color: var(--theme-text); 144:   cursor: pointer; 145: 146:   display: flex;</pre>		
	test/server/blueprintSpec.ts (Line 20)	<b>S1848</b> Either remove this useless object instantiation of "ExifImage" or use it.

#### ■ Problematic Code:

```
17: async function parseExifData (path: string): Promise<any> {
18:   return await new Promise((resolve, reject) => {
19:     // eslint-disable-next-line no-new
>>> 20:     new ExifImage({ image: path }, (error: Error | null, exifData: any) => {
21:       if (error != null) {
22:         expect.fail(`Could not read EXIF data from ${path}`)
23:         reject(error)

```

M

frontend/src/app/payment  
payment.component.html  
(Line 84)

**S6853**

A form label must be associated with a control.

#### ■ Problematic Code:

```
81:     <div class="row responsive-row">
82:       <div class="col col-34 mat-elevation-z0">
83:         <div class="payment-label">
>>> 84:         <label translate>LABEL_DONATIONS</label>
85:       </div>
86:     <small>
87:       (@if (applicationName === 'OWASP Juice Shop') {

```

M

frontend/src/app/photo-wall  
photo-wall.component.html  
(Line 14)

**S6851**

Remove redundant word "image" from the "alt" attribute of your "img" tag.

#### ■ Problematic Code:

```
11:     <div class="grid">
12:       @for (image of slideshowDataSource; track image) {
13:         <span class="container mat-elevation-z6">
>>> 14:         
15:         <div class="overlay">
16:           <div>{{ image.caption }}</div>
17:         @if (twitterHandle) {

```

M

frontend/src/app/order-completion  
order-completion.component.html  
(Line 76)

**S5256**

Add "" headers to this "".

#### ■ Problematic Code:

```
73:         <mat-header-cell *matHeaderCellDef
translate>LABEL_TOTAL_PRICE</mat-header-cell>
74:         <mat-cell *matCellDef="let element" class="price-align">{{
(element.total).toFixed(2) }}&current;</mat-cell>
75:         <mat-footer-cell *matFooterCellDef>
>>> 76:         <table class="price-align">
77:           <tr class="mat-row">
78:             <td>{{ orderDetails.itemTotal?.toFixed(2) }}&current;</td>
79:           </tr>

```

M

frontend/src/app/order-summary  
order-summary.component.html  
(Line 50)

**S5256**

Add "" headers to this "".





<b>■ Problematic Code:</b> <pre> 1: &lt;!DOCTYPE html&gt; &gt;&gt;&gt; 2: &lt;html&gt;       3: &lt;head&gt;       4:     &lt;title&gt;Welcome to Planet Orangeuze&lt;/title&gt;       5:     &lt;script src="/assets/private/three.js"&gt;&lt;/script&gt; </pre>		
L	frontend/src/app/chatbot chatbot.component.html (Line 18)	<b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.
<b>■ Problematic Code:</b> <pre> 15:         @for (message of messages; track message; let index = \$index) { 16:             &lt;div class="message-container"&gt; 17:                 @if (message.author == 'bot') { &gt;&gt;&gt; 18:                     &lt;img src="{{juicyImageSrc}}" class="juicy-chat-bot-image"/&gt; 19:                 } 20:                 @if (message.author == 'user') { 21:                     &lt;img src="{{profileImageSrc}}" class="profile-image"/&gt; </pre>		
L	frontend/src/app/chatbot chatbot.component.html (Line 21)	<b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.
<b>■ Problematic Code:</b> <pre> 18:             &lt;img src="{{juicyImageSrc}}" class="juicy-chat-bot-image"/&gt; 19:         } 20:         @if (message.author == 'user') { &gt;&gt;&gt; 21:             &lt;img src="{{profileImageSrc}}" class="profile-image"/&gt; 22:         } 23:         &lt;div class="{{message.author == 'user' ? 'speech-bubble-right' : 'speech-bubble-left'}}"&gt; 24:             {{message.body}} </pre>		
L	frontend/src/app/code-area code-area.component.html (Line 2)	<b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.
<b>■ Problematic Code:</b> <pre> 1: &lt;div id="code-area"&gt; &gt;&gt;&gt; 2:     &lt;pre id="code"&gt;&lt;div id="emphasize"&gt;@for (marker of lineMarkers; track marker) {&lt;div class="lineMarker" [id]='line' + marker.lineNumber" (click)="selectLines(marker.lineNumber)"&gt;{{ marker.marked ? '■' : '■'}}&lt;/div&gt;} 3: &lt;/div&gt;&lt;code 4: [highlight]="code" [lineNumbers]="true" 5: [languages]="langs" </pre>		
L	frontend/src/app/sidenav sidenav.component.html (Line 54)	<b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.

<p>■ <b>Problematic Code:</b></p> <pre> 51:     } 52: 53:     @if (isLoggedIn()) { &gt;&gt;&gt; 54:         &lt;mat-list-item (click)="showOrdersSubmenu = !showOrdersSubmenu" class="parent" 55:             aria-label="Show Orders and Payment Menu"&gt; 56:             &lt;mat-icon&gt; 57:                 check_circle_outline </pre>		
L	frontend/src/app/sidenav sidenav.component.html (Line 129)	<b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.
<p>■ <b>Problematic Code:</b></p> <pre> 126:     } 127: 128:     @if (isLoggedIn()) { &gt;&gt;&gt; 129:         &lt;mat-list-item (click)="showPrivacySubmenu = !showPrivacySubmenu" class="parent" 130:             aria-label="Show Privacy and Security Menu"&gt; 131:             &lt;mat-icon&gt; 132:                 security </pre>		
L	frontend/src/app/address address.component.html (Line 19)	<b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.
<p>■ <b>Problematic Code:</b></p> <pre> 16:         &lt;ng-container matColumnDef="Selection"&gt; 17:             &lt;mat-header-cell *matHeaderCellDef style="display: none;"&gt;&lt;/mat-header-cell&gt; 18:             &lt;mat-cell *matCellDef="let element; let row"&gt; &gt;&gt;&gt; 19:                 &lt;mat-radio-button 20:                     (click)="emitSelectionToParent(element.id)" 21:                     [checked]="selection.isSelected(row)" 22:                     (change)="event ? selection.toggle(row) : null"&gt; </pre>		
L	frontend/src/app/address address.component.html (Line 61)	<b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.
<p>■ <b>Problematic Code:</b></p> <pre> 58:         &lt;/mat-cell&gt; 59:     &lt;/ng-container&gt; 60:     &lt;mat-header-row *matHeaderRowDef="displayedColumns"&gt;&lt;/mat-header-row&gt; &gt;&gt;&gt; 61:     &lt;mat-row 62:         *matRowDef="let row; columns: displayedColumns; let element" 63:         (click)="selection.toggle(row); emitSelectionToParent(element.id)"&gt; 64:     &lt;/mat-row&gt; </pre>		
L	frontend/src/app/search-result search-result.component.html (Line 38)	<b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.



<p>■ <b>Problematic Code:</b></p> <pre> 35:                 &lt;span&gt;{{ "LABEL_SOLD_OUT"   translate }}&lt;/span&gt; 36:             &lt;/div&gt; 37:         } &gt;&gt;&gt; 38:         &lt;div class="product" (click)="showDetail(item)" aria-label="Click for more information about the product" 39:             matTooltip="Click for more information" matTooltipPosition="above"&gt; 40:             &lt;img mat-card-image [src]='assets/public/images/products/' + item.image" alt={{item.name}} 41:             class="img-responsive img-thumbnail" role="button"&gt; </pre>	
<p><b>L</b></p> <p>frontend/src/app/navbar navbar.component.html (Line 134)</p>	<p><b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 131:         &lt;/mat-form-field&gt; 132:     &lt;/div&gt; 133:     @for (language of filteredLanguages; track language.key) { &gt;&gt;&gt; 134:         &lt;mat-radio-button 135:             (click)="changeLanguage(language.key)" 136:             [value]="language" 137:             class="mat-menu-item" </pre>	
<p><b>L</b></p> <p>frontend/src/app/navbar navbar.component.html (Line 126)</p>	<p><b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 123:     &lt;/button&gt; 124: 125:     &lt;mat-menu #menu="matMenu" [overlapTrigger]="true"&gt; &gt;&gt;&gt; 126:         &lt;div class="language-search-container" (click)="\$event.stopPropagation()"&gt; 127:             &lt;mat-form-field class="language-search-field"&gt; 128:                 &lt;mat-icon matPrefix class="search-icon"&gt;search&lt;/mat-icon&gt; 129:                 &lt;mat-label&gt;{{ 'SEARCH'   translate }}&lt;/mat-label&gt; </pre>	
<p><b>L</b></p> <p>frontend/src/app/administration administration.component.html (Line 59)</p>	<p><b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 56: 57:         &lt;ng-container matColumnDef="comment"&gt; 58:             &lt;mat-header-cell *matHeaderCellDef translate&gt;&lt;/mat-header-cell&gt; &gt;&gt;&gt; 59:             &lt;mat-cell *matCellDef="let feedback" (click)="showFeedbackDetails(feedback.comment, feedback.UserId)"&gt; 60:                 &lt;p [innerHTML]="feedback.comment" matTooltip="Click for more information" matTooltipPosition="above"&gt;&lt;/p&gt; 61:             &lt;/mat-cell&gt; 62:         &lt;/ng-container&gt; </pre>	
<p><b>L</b></p> <p>frontend/src/app/administration administration.component.html (Line 119)</p>	<p><b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.</p>

<b>■ Problematic Code:</b> <pre> 116:   &lt;mat-row *matRowDef="let row; columns: userColumns; "&gt;&lt;/mat-row&gt; 117: &lt;/mat-table&gt; 118: &gt;&gt;&gt; 119: &lt;img src="assets/public/images/padding/19px.png" /&gt; </pre>		
L	frontend/src/app/mat-search-bar mat-search-bar.component.html (Line 9)	<b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.
<b>■ Problematic Code:</b> <pre> 6: 7: 8: &lt;span class="mat-search_icons" [class.mat-search_icons--active]="searchVisible"&gt; &gt;&gt;&gt; 9:   &lt;mat-icon class="mat-search_icon-close" (click)="close()" matRipple&gt; 10:     close 11:   &lt;/mat-icon&gt; 12:   &lt;mat-icon class="mat-search_icon-search" (click)="open()" matRipple&gt; </pre>		
L	frontend/src/app/mat-search-bar mat-search-bar.component.html (Line 12)	<b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.
<b>■ Problematic Code:</b> <pre> 9:   &lt;mat-icon class="mat-search_icon-close" (click)="close()" matRipple&gt; 10:     close 11:   &lt;/mat-icon&gt; &gt;&gt;&gt; 12:   &lt;mat-icon class="mat-search_icon-search" (click)="open()" matRipple&gt; 13:     search 14:   &lt;/mat-icon&gt; 15: &lt;/span&gt; </pre>		
L	frontend/src/app/web3-sandbox web3-sandbox.component.html (Line 169)	<b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.
<b>■ Problematic Code:</b> <pre> 166:   } 167: &lt;/div&gt; 168: &lt;/div&gt; &gt;&gt;&gt; 169: &lt;img src="assets/public/images/padding/11px.png" /&gt; 170: &lt;/div&gt; 171: </pre>		
L	frontend/src/app/faucet faucet.component.html (Line 6)	<b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.

<p>■ <b>Problematic Code:</b></p> <pre> 3:      &lt;div class="mdc-card"&gt; 4:          &lt;h1&gt;{{"TITLE_BEE_HAVEN"   translate}}&lt;/h1&gt; 5:          &lt;div class="faucet-image"&gt; &gt;&gt;&gt; 6:              &lt;img src="assets/public/images/BeeOwner.png" /&gt; 7:          &lt;/div&gt; 8:          &lt;p&gt;{{"BEE_HAVEN_INTRO"   translate}}&lt;/p&gt; 9:          &lt;div class="faucet-balance"&gt; </pre>		
<p><b>L</b></p>	<p>frontend/src/app/faucet faucet.component.html (Line 67)</p>	<p><b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 64:      &lt;mat-card appearance="outlined" class="mat-elevation-z6 honeypot-container"&gt; 65:          &lt;div class="mdc-card"&gt; 66:              &lt;div class="honeypot-image mat-elevation-z6"&gt; &gt;&gt;&gt; 67:                  &lt;img src="assets/public/images/HoneyPot.png" /&gt; 68:              &lt;/div&gt; 69:              &lt;h2&gt;{{"BEE_HONEYPOT_TITLE"   translate}}&lt;/h2&gt; 70:              &lt;p&gt;{{"BEE_HONEYPOT_DESCRIPTION"   translate}}&lt;/p&gt; </pre>		
<p><b>L</b></p>	<p>frontend/src/app/nft-unlock nft-unlock.component.html (Line 13)</p>	<p><b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 10: 11:      &lt;div class="detail-container offer-container align-self-center"&gt; 12:          &lt;div&gt; &gt;&gt;&gt; 13:              &lt;img src="assets/public/images/products/juicy_chatbot.jpg" /&gt; 14:          &lt;/div&gt; 15: 16:          @if (successResponse) { </pre>		
<p><b>L</b></p>	<p>frontend/src/app/delivery-method delivery-method.component.html (Line 28)</p>	<p><b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 25:          &lt;ng-container matColumnDef="Selection"&gt; 26:              &lt;mat-header-cell *matHeaderCellDef&gt;&lt;/mat-header-cell&gt; 27:              &lt;mat-cell *matCellDef="let element; let row"&gt; &gt;&gt;&gt; 28:                  &lt;mat-radio-button (click)=selectMethod(element.id) [checked]="selection.isSelected(row) " 29:                      (change)=" \$event ? selection.toggle(row) : null"&gt;&lt;/mat-radio-button&gt; 30:                  &lt;/mat-cell&gt; 31:              &lt;/ng-container&gt; </pre>		
<p><b>L</b></p>	<p>frontend/src/app/delivery-method delivery-method.component.html (Line 45)</p>	<p><b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.</p>

<p>■ <b>Problematic Code:</b></p> <pre> 42:         &lt;mat-cell *matCellDef="let element"&gt;{{ element.eta }} {{ "LABEL_DAYS"   translate}}&lt;/mat-cell&gt; 43:         &lt;/ng-container&gt; 44:         &lt;mat-header-row *matHeaderRowDef="displayedColumns"&gt;&lt;/mat-header-row&gt; &gt;&gt;&gt; 45:         &lt;mat-row *matRowDef="let row; columns: displayedColumns; let element" 46:             (click)="selection.toggle(row); selectMethod(element.id)"&gt;&lt;/mat-row&gt; 47:         &lt;/mat-table&gt; 48:     &lt;/div&gt; </pre>		
L	frontend/src/app/token-sale token-sale.component.html (Line 101)	<b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.
<p>■ <b>Problematic Code:</b></p> <pre> 98:         &lt;/div&gt; 99:     &lt;/mat-card&gt; 100: &lt;/div&gt; &gt;&gt;&gt; 101:     &lt;img src="assets/public/images/padding/56px.png" /&gt; 102: &lt;/div&gt; 103: &lt;/mat-card&gt; 104: </pre>		
L	frontend/src/app/privacy-policy privacy-policy.component.html (Line 172)	<b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.
<p>■ <b>Problematic Code:</b></p> <pre> 169:     &lt;/ul&gt; 170: &lt;/section&gt; 171: &gt;&gt;&gt; 172:     &lt;img src="assets/public/images/padding/81px.png" /&gt; 173: &lt;/div&gt; 174: &lt;/mat-card&gt; 175: </pre>		
L	frontend/src/app/search-result search-result.component.html (Line 40)	<b>S6842</b> Non-interactive elements should not be assigned interactive roles.
<p>■ <b>Problematic Code:</b></p> <pre> 37:         } 38:         &lt;div class="product" (click)="showDetail(item)" aria-label="Click for more information about the product" 39:             matTooltip="Click for more information" matTooltipPosition="above"&gt; &gt;&gt;&gt; 40:             &lt;img mat-card-image [src]='assets/public/images/products/'+item.image" alt={{item.name}} 41:                 class="img-responsive img-thumbnail" role="button"&gt; 42:                 &lt;div class="info-box"&gt; 43:                     &lt;div class="item-name"&gt;{{item.name}}&lt;/div&gt; </pre>		
L	frontend/src/app/search-result search-result.component.html (Line 40)	<b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.

<p>■ <b>Problematic Code:</b></p> <pre> 37:             } 38:             &lt;div class="product" (click)="showDetail(item)" aria-label="Click for more information about the product" 39:                 matTooltip="Click for more information" matTooltipPosition="above"&gt; &gt;&gt;&gt; 40:                 &lt;img mat-card-image [src]='assets/public/images/products/' + item.image" alt={{item.name}} 41:                     class="img-responsive img-thumbnail" role="button"&gt; 42:                 &lt;div class="info-box"&gt; 43:                     &lt;div class="item-name"&gt;{{item.name}}&lt;/div&gt; </pre>	
<p><b>L</b></p> <p>frontend/src/app/payment-method payment-method.component.html (Line 14)</p>	<p><b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 11:         &lt;ng-container matColumnDef="Selection"&gt; 12:             &lt;mat-header-cell *matHeaderCellDef&gt;&lt;/mat-header-cell&gt; 13:             &lt;mat-cell *matCellDef="let element"&gt; &gt;&gt;&gt; 14:             &lt;mat-radio-button (click)="emitSelectionToParent(element.id)"&gt;&lt;/mat-radio-button&gt; 15:             &lt;/mat-cell&gt; 16:         &lt;/ng-container&gt; 17:         &lt;ng-container matColumnDef="Number"&gt; </pre>	
<p><b>L</b></p> <p>frontend/src/app/product-details product-details.component.html (Line 51)</p>	<p><b>MouseEventWithoutKeyboardEquivalentCheck</b> Add a 'onKeyPress onKeyDown onKeyUp' attribute to this tag.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 48:         @for (review of reviews\$ async; track review) { 49:             &lt;div class="comment"&gt; 50:                 &lt;div class="review-row"&gt; &gt;&gt;&gt; 51:                 &lt;div class="review-text" 52:                     (click)="review.author !== 'Anonymous' &amp;&amp; review.author === author &amp;&amp; editReview(review)" 53:                     matTooltipDisabled="{{review.author !== author}}" matTooltip="{{ 'LABEL_EDIT_REVIEW'   translate }}" 54:                     matTooltipPosition="right"&gt; </pre>	
<p><b>L</b></p> <p>frontend/src/app/score-board score-board.component.html (Line 53)</p>	<p><b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 50:         &lt;/div&gt; 51:     } 52: } &gt;&gt;&gt; 53: &lt;img src="assets/public/images/padding/1px.png" /&gt; 54: } 55: 56: </pre>	

<div>L</div>	frontend/src/app/token-sale token-sale.component.html (Line 96)	<b>S6850</b> Headings must have content and the content must be accessible by a screen reader.
<div> <div> <div>■</div> <b>Problematic Code:</b> </div> <pre> 93: 94:     &lt;mat-card appearance="outlined" class="mat-elevation-z6"&gt; 95:         &lt;div class="mdc-card"&gt; &gt;&gt;&gt; 96:             &lt;h5&gt;&lt;i class='fas fa-comments fa-2x'&gt;&lt;/i&gt; &lt;span style="margin-left: 10px;" [innerHTML]='ICO_FAQ_QUESTION'   translate:{juicycoin: altcoinName}&gt;&lt;/span&gt;&lt;/h5&gt; 97:                 &lt;small class="text-justify"&gt;{{"ICO_FAQ_ANSWER"   translate}}&lt;/small&gt; 98:             &lt;/div&gt; 99:         &lt;/mat-card&gt; </pre> </div>		
<div>L</div>	frontend/src/app/recycle recycle.component.html (Line 64)	<b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.
<div> <div> <div>■</div> <b>Problematic Code:</b> </div> <pre> 61:     &lt;h3 class="responsibility-header"&gt;{{"SECTION_PRESS_JUICE_RESPONSIBLY"   translate}}&lt;/h3&gt; 62: 63:     &lt;mat-card class="mat-elevation-z0 card-row"&gt; &gt;&gt;&gt; 64:         &lt;img mat-card-image [src]="topImage"&gt; 65:         &lt;mat-card-content&gt; 66:             &lt;div&gt; 67:                 &lt;small&gt;Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut </pre> </div>		
<div>L</div>	frontend/src/app/recycle recycle.component.html (Line 76)	<b>ImgWithoutAltCheck</b> Add an "alt" attribute to this image.
<div> <div> <div>■</div> <b>Problematic Code:</b> </div> <pre> 73:     &lt;/mat-card&gt; 74: 75:     &lt;mat-card class="mat-elevation-z0 card-row"&gt; &gt;&gt;&gt; 76:         &lt;img mat-card-image [src]="bottomImage"&gt; 77:         &lt;mat-card-content&gt; 78:             &lt;div&gt; 79:                 &lt;small&gt;Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor </pre> </div>		

## Maintainability Issues

Total: 452 issues (High: 105, Medium: 206, Low: 92)

Severity	File Path	Rule & Message
	frontend/src/app/change-password/change-password.component.ts (Line 80)	<b>S7655</b> Lifecycle interface 'OnInit' should be implemented for method 'ngOnInit'. ( <a href="https://angular.dev/style-guide#style-09-01">https://angular.dev/style-guide#style-09-01</a> )
<b>■ Problematic Code:</b> <pre> 77:     private readonly translate: TranslateService 78:   ) {} 79: &gt;&gt;&gt; 80:   ngOnInit (): void { 81:     this.formSubmitService.attachEnterKeyHandler( 82:       'password-form', 83:       'changeButton', </pre>		
	frontend/src/app/last-login-ip/last-login-ip.component.ts (Line 23)	<b>S7655</b> Lifecycle interface 'OnInit' should be implemented for method 'ngOnInit'. ( <a href="https://angular.dev/style-guide#style-09-01">https://angular.dev/style-guide#style-09-01</a> )
<b>■ Problematic Code:</b> <pre> 20:   lastLoginIp: any = '?' 21:   constructor (private readonly sanitizer: DomSanitizer) {} 22: &gt;&gt;&gt; 23:   ngOnInit (): void { 24:     try { 25:       this.parseAuthToken() 26:     } catch (err) { </pre>		
	frontend/src/app/nft-unlock/nft-unlock.component.ts (Line 32)	<b>S7655</b> Lifecycle interface 'OnInit' should be implemented for method 'ngOnInit'. ( <a href="https://angular.dev/style-guide#style-09-01">https://angular.dev/style-guide#style-09-01</a> )
<b>■ Problematic Code:</b> <pre> 29: 30:   constructor (private readonly keysService: KeysService) {} 31: &gt;&gt;&gt; 32:   ngOnInit (): void { 33:     this.checkChallengeStatus() 34:   } 35: </pre>		
	frontend/src/app/two-factor-auth/two-factor-auth.component.ts (Line 59)	<b>S7655</b> Lifecycle interface 'OnInit' should be implemented for method 'ngOnInit'. ( <a href="https://angular.dev/style-guide#style-09-01">https://angular.dev/style-guide#style-09-01</a> )

#### ■ Problematic Code:

```

56:
57:   constructor (private readonly twoFactorAuthService: TwoFactorAuthService, private
readonly configurationService: ConfigurationService, private readonly snackBar: MatSnackBar,
private readonly translateService: TranslateService, private readonly snackBarHelperService:
SnackBarHelperService) {}
58:
>>> 59:   ngOnInit (): void {
60:       this.updateStatus()
61:   }
62:

```

B

frontend/src/app/mat-search-bar  
mat-search-bar.component.ts  
(Line 55)

#### S7652

Output bindings, including aliases, should not be named "on", nor prefixed with it (<https://angular.dev/guide/components/outputs#choosing-event-names>)

#### ■ Problematic Code:

```

52:   @Input() matAutocomplete: MatAutocomplete
53:   @Input() placeholder = ''
54:   @Input() alwaysOpen: boolean = false
>>> 55:   @Output() onBlur = new EventEmitter<string>()
56:   @Output() onClose = new EventEmitter<void>()
57:   @Output() onEnter = new EventEmitter<string>()
58:   @Output() onFocus = new EventEmitter<string>()

```

B

frontend/src/app/mat-search-bar  
mat-search-bar.component.ts  
(Line 56)

#### S7652

Output bindings, including aliases, should not be named "on", nor prefixed with it (<https://angular.dev/guide/components/outputs#choosing-event-names>)

#### ■ Problematic Code:

```

53:   @Input() placeholder = ''
54:   @Input() alwaysOpen: boolean = false
55:   @Output() onBlur = new EventEmitter<string>()
>>> 56:   @Output() onClose = new EventEmitter<void>()
57:   @Output() onEnter = new EventEmitter<string>()
58:   @Output() onFocus = new EventEmitter<string>()
59:   @Output() onOpen = new EventEmitter<void>()

```

B

frontend/src/app/mat-search-bar  
mat-search-bar.component.ts  
(Line 57)

#### S7652

Output bindings, including aliases, should not be named "on", nor prefixed with it (<https://angular.dev/guide/components/outputs#choosing-event-names>)





#### ■ Problematic Code:

```

54:   @Input() alwaysOpen: boolean = false
55:   @Output() onBlur = new EventEmitter<string>()
56:   @Output() onClose = new EventEmitter<void>()
>>> 57:   @Output() onEnter = new EventEmitter<string>()
58:   @Output() onFocus = new EventEmitter<string>()
59:   @Output() onOpen = new EventEmitter<void>()
60:

```



	frontend/src/app/mat-search-bar mat-search-bar.component.ts (Line 58)	<b>S7652</b> Output bindings, including aliases, should not be named "on", nor prefixed with it ( <a href="https://angular.dev/guide/components/outputs#choosing-event-names">https://angular.dev/guide/components/outputs#choosing-event-names</a> )
<div> <div>■ Problematic Code:</div> <pre> 55:   @Output() onBlur = new EventEmitter&lt;string&gt;() 56:   @Output() onClose = new EventEmitter&lt;void&gt;() 57:   @Output() onEnter = new EventEmitter&lt;string&gt;() &gt;&gt;&gt; 58:   @Output() onFocus = new EventEmitter&lt;string&gt;() 59:   @Output() onOpen = new EventEmitter&lt;void&gt;() 60: 61:   searchVisible = false </pre> </div>		
	frontend/src/app/mat-search-bar mat-search-bar.component.ts (Line 59)	<b>S7652</b> Output bindings, including aliases, should not be named "on", nor prefixed with it ( <a href="https://angular.dev/guide/components/outputs#choosing-event-names">https://angular.dev/guide/components/outputs#choosing-event-names</a> )
<div> <div>■ Problematic Code:</div> <pre> 56:   @Output() onClose = new EventEmitter&lt;void&gt;() 57:   @Output() onEnter = new EventEmitter&lt;string&gt;() 58:   @Output() onFocus = new EventEmitter&lt;string&gt;() &gt;&gt;&gt; 59:   @Output() onOpen = new EventEmitter&lt;void&gt;() 60: 61:   searchVisible = false 62: </pre> </div>		
	frontend/src/app/code-fixes code-fixes.component.ts (Line 28)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
<div> <div>■ Problematic Code:</div> <pre> 25:   @Input('fixes') 26:   public fixes: string[] = [] 27: &gt;&gt;&gt; 28:   @Input('selectedFix') 29:   public selectedFix: number = 0 30: 31:   @Input('randomFixes') </pre> </div>		
	frontend/src/app/code-fixes code-fixes.component.ts (Line 31)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
<div> <div>■ Problematic Code:</div> <pre> 28:   @Input('selectedFix') 29:   public selectedFix: number = 0 30: &gt;&gt;&gt; 31:   @Input('randomFixes') 32:   public randomFixes: RandomFixes[] = [] 33: 34:   @Input('format') </pre> </div>		





	frontend/src/app/address address.component.ts (Line 31)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
<div> <div>■ Problematic Code:</div> <pre> 28: }) 29: export class AddressComponent implements OnInit { 30:   @Output() emitSelection = new EventEmitter() &gt;&gt;&gt; 31:   @Input('allowEdit') public allowEdit: boolean = false 32:   @Input('addNewAddressDiv') public addNewAddressDiv: boolean = true 33:   @Input('showNextButton') public showNextButton: boolean = false 34:   public addressId: any = undefined </pre> </div>		
	frontend/src/app/address address.component.ts (Line 32)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
<div> <div>■ Problematic Code:</div> <pre> 29: export class AddressComponent implements OnInit { 30:   @Output() emitSelection = new EventEmitter() 31:   @Input('allowEdit') public allowEdit: boolean = false &gt;&gt;&gt; 32:   @Input('addNewAddressDiv') public addNewAddressDiv: boolean = true 33:   @Input('showNextButton') public showNextButton: boolean = false 34:   public addressId: any = undefined 35:   public displayedColumns = ['Name', 'Address', 'Country'] </pre> </div>		
	frontend/src/app/web3-sandbox web3-sandbox.component.ts (Line 54)	<b>S7655</b> Lifecycle interface 'OnInit' should be implemented for method 'ngOnInit'. ( <a href="https://angular.dev/style-guide#style-09-01">https://angular.dev/style-guide#style-09-01</a> )
<div> <div>■ Problematic Code:</div> <pre> 51:   private readonly changeDetectorRef: ChangeDetectorRef 52:   ) {} 53: &gt;&gt;&gt; 54:   ngOnInit (): void { 55:     this.handleAuth() 56:     window.ethereum.on('chainChanged', this.handleChainChanged.bind(this)) 57:   } </pre> </div>		
	frontend/src/app/wallet-web3 wallet-web3.component.ts (Line 52)	<b>S7655</b> Lifecycle interface 'OnInit' should be implemented for method 'ngOnInit'. ( <a href="https://angular.dev/style-guide#style-09-01">https://angular.dev/style-guide#style-09-01</a> )
<div> <div>■ Problematic Code:</div> <pre> 49:   challengeSolved = false 50:   errorMessage = '' 51:   metamaskAddress = '' &gt;&gt;&gt; 52:   ngOnInit (): void { 53:     this.handleAuth() 54:     window.ethereum.on('chainChanged', this.handleChainChanged.bind(this)) 55:   } </pre> </div>		
	frontend/src/app/faucet faucet.component.ts (Line 64)	<b>S7655</b> Lifecycle interface 'OnInit' should be implemented for method 'ngOnInit'. ( <a href="https://angular.dev/style-guide#style-09-01">https://angular.dev/style-guide#style-09-01</a> )




<p>■ <b>Problematic Code:</b></p> <pre> 61:   errorMessage = '' 62:   metamaskAddress = '' 63: &gt;&gt;&gt; 64:   ngOnInit (): void { 65:       this.translateService.get('NFT_MINT_TEXT_INTRO').subscribe((translatedString: string) =&gt; { 66:           this.nftMintText = translatedString 67:       }) </pre>		
	frontend/src/app/code-fixes code-fixes.component.ts (Line 34)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
<p>■ <b>Problematic Code:</b></p> <pre> 31:   @Input('randomFixes') 32:   public randomFixes: RandomFixes[] = [] 33: &gt;&gt;&gt; 34:   @Input('format') 35:   public format: string = 'SideBySide' 36: 37:   @ViewChild('codeComponent', { static: false }) codeComponent: NgxTextDiffComponent </pre>		
	frontend/src/app/code-fixes code-fixes.component.ts (Line 25)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
<p>■ <b>Problematic Code:</b></p> <pre> 22:   @Input('snippet') 23:   public snippet: string = '' 24: &gt;&gt;&gt; 25:   @Input('fixes') 26:   public fixes: string[] = [] 27: 28:   @Input('selectedFix') </pre>		
	frontend/src/app/code-fixes code-fixes.component.ts (Line 22)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
<p>■ <b>Problematic Code:</b></p> <pre> 19:       this.differ = this.differs.find({}).create() 20:   } 21: &gt;&gt;&gt; 22:   @Input('snippet') 23:   public snippet: string = '' 24: 25:   @Input('fixes') </pre>		
	frontend/src/app/code-area code-area.component.ts (Line 32)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )

<p>■ <b>Problematic Code:</b></p> <pre> 29:     this._code = value    '' 30:   } 31: &gt;&gt;&gt; 32:   @Input('vulnLines') 33:     public vulnLines: number[] 34: 35:     public lineMarkers: LineMarker[] </pre>		
B	frontend/src/app/purchase-basket purchase-basket.component.ts (Line 30)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
	<p>■ <b>Problematic Code:</b></p> <pre> 27: export class PurchaseBasketComponent implements OnInit { 28:   @Input('allowEdit') public allowEdit: boolean = false 29:   @Input('displayTotal') public displayTotal: boolean = false &gt;&gt;&gt; 30:   @Input('totalPrice') public totalPrice: boolean = true 31:   @Output() emitTotal = new EventEmitter() 32:   @Output() emitProductCount = new EventEmitter() 33:   public tableColumns = ['image', 'product', 'quantity', 'price'] </pre>	
B	frontend/src/app/address address.component.ts (Line 33)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
	<p>■ <b>Problematic Code:</b></p> <pre> 30:   @Output() emitSelection = new EventEmitter() 31:   @Input('allowEdit') public allowEdit: boolean = false 32:   @Input('addNewAddressDiv') public addNewAddressDiv: boolean = true &gt;&gt;&gt; 33:   @Input('showNextButton') public showNextButton: boolean = false 34:   public addressId: any = undefined 35:   public displayedColumns = ['Name', 'Address', 'Country'] 36:   selection = new SelectionModel&lt;Element&gt;(false, []) </pre>	
B	frontend/src/app/purchase-basket purchase-basket.component.ts (Line 28)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )
	<p>■ <b>Problematic Code:</b></p> <pre> 25:   imports: [MatTable, MatColumnDef, MatHeaderCellDef, MatHeaderCell, MatCellDef, MatCell, MatFooterCellDef, MatFooterCell, MatIconButton, MatHeaderRowDef, MatHeaderRow, MatRowDef, MatRow, MatFooterRowDef, MatFooterRow, TranslateModule] 26: }) 27: export class PurchaseBasketComponent implements OnInit { &gt;&gt;&gt; 28:   @Input('allowEdit') public allowEdit: boolean = false 29:   @Input('displayTotal') public displayTotal: boolean = false 30:   @Input('totalPrice') public totalPrice: boolean = true 31:   @Output() emitTotal = new EventEmitter() </pre>	
B	frontend/src/app/purchase-basket purchase-basket.component.ts (Line 29)	<b>S7649</b> Input bindings should not be aliased ( <a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a> )




<p>■ <b>Problematic Code:</b></p> <pre> 26: }) 27: export class PurchaseBasketComponent implements OnInit { 28:   @Input('allowEdit') public allowEdit: boolean = false &gt;&gt;&gt; 29:   @Input('displayTotal') public displayTotal: boolean = false 30:   @Input('totalPrice') public totalPrice: boolean = true 31:   @Output() emitTotal = new EventEmitter() 32:   @Output() emitProductCount = new EventEmitter() </pre>		
<p><b>B</b></p>	<p>frontend/src/app/payment-method payment-method.component.ts (Line 34)</p>	<p><b>S7649</b> Input bindings should not be aliased (<a href="https://angular.dev/style-guide#style-05-13">https://angular.dev/style-guide#style-05-13</a>)</p>
<p>■ <b>Problematic Code:</b></p> <pre> 31: 32: export class PaymentMethodComponent implements OnInit { 33:   @Output() emitSelection = new EventEmitter() &gt;&gt;&gt; 34:   @Input('allowDelete') public allowDelete: boolean = false 35:   public displayedColumns = ['Number', 'Name', 'Expiry'] 36:   public nameControl: UntypedFormControl = new UntypedFormControl('', [Validators.required]) 37:   // eslint-disable-next-line @typescript-eslint/no-loss-of-precision </pre>		
<p><b>H</b></p>	<p>frontend/src/app/search-result search-result.component.ts (Line 74)</p>	<p><b>S3776</b> Refactor this function to reduce its Cognitive Complexity from 18 to the 15 allowed.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 71:   const products = this.productService.search('') 72:   const quantities = this.quantityService.getAll() 73:   forkJoin([quantities, products]).subscribe({ &gt;&gt;&gt; 74:     next: ([quantities, products]) =&gt; { 75:       const dataTable: TableEntry[] = [] 76:       this.tableData = products 77:       this.trustProductDescription(products) // vuln-code-snippet neutral-line restfulXssChallenge </pre>		
<p><b>H</b></p>	<p>frontend/src/app/search-result search-result.component.ts (Line 209)</p>	<p><b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 206:           this.basketService.put(existingBasketItem.id, { quantity: newQuantity }).subscribe({ 207:             next: (updatedBasketItem) =&gt; { 208:               this.productService.get(updatedBasketItem.ProductId).subscribe({ &gt;&gt;&gt; 209:                 next: (product) =&gt; { 210:                   this.translateService.get('BASKET_ADD_SAME_PRODUCT', { product: product.name }).subscribe({ 211:                     next: (basketAddSameProduct) =&gt; { 212:                       this.snackBarHelperService.open(basketAddSameProduct, 'confirmBar') </pre>		

<div>H</div>	frontend/src/app/search-result search-result.component.ts (Line 221)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div> <div>■ Problematic Code:</div> <pre> 218:             } 219:         }) 220:     }, &gt;&gt;&gt; 221:         error: (err) =&gt; { console.log(err) } 222:     }) 223: }, 224:     error: (err) =&gt; { </pre> </div>		
<div>H</div>	frontend/src/app/search-result search-result.component.ts (Line 241)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div> <div>■ Problematic Code:</div> <pre> 238:         this.productService.get(newBasketItem.ProductId).subscribe({ 239:             next: (product) =&gt; { 240:                 this.translateService.get('BASKET_ADD_PRODUCT', { product: product.name }).subscribe({ &gt;&gt;&gt; 241:                     next: (basketAddProduct) =&gt; { 242:                         this.snackBarHelperService.open(basketAddProduct, 'confirmBar') 243:                         this.basketService.updateNumberOfCartItems() 244:                     }, </pre> </div>		
<div>H</div>	frontend/src/app/search-result search-result.component.ts (Line 245)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div> <div>■ Problematic Code:</div> <pre> 242:         this.snackBarHelperService.open(basketAddProduct, 'confirmBar') 243:         this.basketService.updateNumberOfCartItems() 244:     }, &gt;&gt;&gt; 245:     error: (translationId) =&gt; { 246:         this.snackBarHelperService.open(translationId, 'confirmBar') 247:         this.basketService.updateNumberOfCartItems() 248:     } </pre> </div>		
<div>H</div>	frontend/src/app server-started-notification server-started-notification.compone nt.ts (Line 42)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div> <div>■ Problematic Code:</div> <pre> 39:         this.challengeService.restoreProgress(encodeURIComponent(continueCode)).subs cribe({ 40:             next: () =&gt; { 41:                 this.translate.get('AUTO_RESTORED_PROGRESS').subscribe({ &gt;&gt;&gt; 42:                     next: (notificationServerStarted) =&gt; { 43:                         this.hackingProgress.autoRestoreMessage = notificationServerStarted 44:                     }, 45:                     error: (translationId) =&gt; { </pre> </div>		

	frontend/src/app server-started-notification server-started-notification.component.ts (Line 45)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div> <div>■ Problematic Code:</div> <pre> 42:         next: (notificationServerStarted) =&gt; { 43:             this.hackingProgress.autoRestoreMessage = notificationServerStarted 44:         }, &gt;&gt;&gt; 45:         error: (translationId) =&gt; { 46:             this.hackingProgress.autoRestoreMessage = translationId 47:         } 48:     }) </pre> </div>		
	frontend/src/app server-started-notification server-started-notification.component.ts (Line 53)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div> <div>■ Problematic Code:</div> <pre> 50:         error: (error) =&gt; { 51:             console.log(error) 52:             this.translate.get('AUTO_RESTORE_PROGRESS_FAILED', { error }).subscribe({ &gt;&gt;&gt; 53:                 next: (notificationServerStarted) =&gt; { 54:                     this.hackingProgress.autoRestoreMessage = notificationServerStarted 55:                 }, 56:                 error: (translationId) =&gt; { </pre> </div>		
	frontend/src/app server-started-notification server-started-notification.component.ts (Line 56)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div> <div>■ Problematic Code:</div> <pre> 53:         next: (notificationServerStarted) =&gt; { 54:             this.hackingProgress.autoRestoreMessage = notificationServerStarted 55:         }, &gt;&gt;&gt; 56:         error: (translationId) =&gt; { 57:             this.hackingProgress.autoRestoreMessage = translationId 58:         } 59:     }) </pre> </div>		
	test/server/fileUploadSpec.ts (Line 33)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<p>■ <b>Problematic Code:</b></p> <pre> 30:         challenges.uploadSizeChallenge = { solved: false, save } as unknown as Challenge 31:         req.file.size = size 32: &gt;&gt;&gt; 33:         checkUploadSize(req, res, () =&gt; {}) 34: 35:         expect(challenges.uploadSizeChallenge.solved).to.equal(false) 36:     }) </pre>		
	routes/dataExport.ts (Line 88)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 85:         likedBy: string 86:     }&gt;) =&gt; { 87:         if (reviews.length &gt; 0) { &gt;&gt;&gt; 88:             reviews.forEach(review =&gt; { 89:                 userData.reviews.push({ 90:                     message: review.message, 91:                     author: review.author, </pre>		
	routes/dataExport.ts (Line 100)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 97:         } 98:         const emailHash = security.hash(email).slice(0, 4) 99:         for (const order of userData.orders) { &gt;&gt;&gt; 100:             challengeUtils.solveIf(challenges.dataExportChallenge, () =&gt; { return order.orderId.split('-')[0] !== emailHash }) 101:         } 102:         res.status(200).send({ userData: JSON.stringify(userData, null, 2), confirmation: 'Your data export will open in a new Browser window.' }) 103:     }, </pre>		
	routes/languages.ts (Line 25)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 22:         if (err != null) { 23:             next(new Error(`Unable to read i18n directory: \${err.message}`)) 24:         } &gt;&gt;&gt; 25:         languageFiles.forEach((fileName) =&gt; { 26:             // eslint-disable-next-line @typescript-eslint/no-misused-promises 27:             fs.readFile('frontend/dist/frontend/assets/i18n/' + fileName, 'utf-8', async (err, content) =&gt; { 28:                 if (err != null) { </pre>		
	routes/metrics.ts (Line 170)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.



<p>■ <b>Problematic Code:</b></p> <pre> 167:         } 168: 169:         void retrieveChallengesWithCodeSnippet().then(challenges =&gt; { &gt;&gt;&gt; 170:             ChallengeModel.count({ where: { codingChallengeStatus: { [Op.eq]: 1 } } }).then((count: number) =&gt; { 171:                 codingChallengesProgressMetrics.set({ phase: 'find it' }, count) 172:             }).catch(() =&gt; { 173:                 throw new Error('Unable to retrieve and count such challenges. Please try again') </pre>		
	routes/metrics.ts (Line 172)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 169:         void retrieveChallengesWithCodeSnippet().then(challenges =&gt; { 170:             ChallengeModel.count({ where: { codingChallengeStatus: { [Op.eq]: 1 } } }).then((count: number) =&gt; { 171:                 codingChallengesProgressMetrics.set({ phase: 'find it' }, count) &gt;&gt;&gt; 172:             }).catch(() =&gt; { 173:                 throw new Error('Unable to retrieve and count such challenges. Please try again') 174:             }) 175: </pre>		
	routes/metrics.ts (Line 176)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 173:             throw new Error('Unable to retrieve and count such challenges. Please try again') 174:         }) 175: &gt;&gt;&gt; 176:         ChallengeModel.count({ where: { codingChallengeStatus: { [Op.eq]: 2 } } }).then((count: number) =&gt; { 177:             codingChallengesProgressMetrics.set({ phase: 'fix it' }, count) 178:         }).catch(_: unknown) =&gt; { 179:             throw new Error('Unable to retrieve and count such challenges. Please try again') </pre>		
	routes/metrics.ts (Line 178)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 175: 176:         ChallengeModel.count({ where: { codingChallengeStatus: { [Op.eq]: 2 } } }).then((count: number) =&gt; { 177:             codingChallengesProgressMetrics.set({ phase: 'fix it' }, count) &gt;&gt;&gt; 178:         }).catch(_: unknown) =&gt; { 179:             throw new Error('Unable to retrieve and count such challenges. Please try again') 180:         }) 181: </pre>		

H	routes/metrics.ts (Line 182)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre data-bbox="183 392 1412 750"> 179:         throw new Error('Unable to retrieve and count such challenges. Please try again') 180:     }) 181: &gt;&gt;&gt; 182:         ChallengeModel.count({ where: { codingChallengeStatus: { [Op.ne]: 0 } } }).then((count: number) =&gt; { 183:             codingChallengesProgressMetrics.set({ phase: 'unsolved' }, challenges.length - count) 184:         }).catch(_: unknown) =&gt; { 185:             throw new Error('Unable to retrieve and count such challenges. Please try again')</pre>		
H	routes/metrics.ts (Line 184)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre data-bbox="183 907 1412 1243"> 181: 182:         ChallengeModel.count({ where: { codingChallengeStatus: { [Op.ne]: 0 } } }).then((count: number) =&gt; { 183:             codingChallengesProgressMetrics.set({ phase: 'unsolved' }, challenges.length - count) &gt;&gt;&gt; 184:         }).catch(_: unknown) =&gt; { 185:             throw new Error('Unable to retrieve and count such challenges. Please try again') 186:         }) 187:     })</pre>		
H	routes/order.ts (Line 70)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre data-bbox="183 1400 1412 1736"> 67:         let totalPoints = 0 68:         basket.Products?.forEach(({ BasketItem, price, deluxePrice, name, id }) =&gt; { 69:             if (BasketItem !== null) { &gt;&gt;&gt; 70:                 challengeUtils.solveIf(challenges.christmasSpecialChallenge, () =&gt; { return BasketItem.ProductId === products.christmasSpecial.id }) 71:                 QuantityModel.findOne({ where: { ProductId: BasketItem.ProductId } }).then((product: any) =&gt; { 72:                     const newQuantity = product.quantity - BasketItem.quantity 73:                     QuantityModel.update({ quantity: newQuantity }, { where: { ProductId: BasketItem?.ProductId } }).catch((error: unknown) =&gt; {</pre>		
H	routes/order.ts (Line 71)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

#### ■ Problematic Code:

```

68:         basket.Products?.forEach(({ BasketItem, price, deluxePrice, name, id }) => {
69:             if (BasketItem != null) {
70:                 challengeUtils.solveIf(challenges.christmasSpecialChallenge, () => {
return BasketItem.ProductId === products.christmasSpecial.id })
>>> 71:                 QuantityModel.findOne({ where: { ProductId: BasketItem.ProductId }
})}.then((product: any) => {
72:                     const newQuantity = product.quantity - BasketItem.quantity
73:                     QuantityModel.update({ quantity: newQuantity }, { where: { ProductId:
BasketItem?.ProductId } }).catch((error: unknown) => {
74:                         next(error)

```

H

routes/order.ts  
(Line 76)

**S2004**

Refactor this code to not nest functions more than 4 levels deep.

#### ■ Problematic Code:

```

73:         QuantityModel.update({ quantity: newQuantity }, { where: { ProductId:
BasketItem?.ProductId } }).catch((error: unknown) => {
74:             next(error)
75:         })
>>> 76:         }).catch((error: unknown) => {
77:             next(error)
78:         })
79:         let itemPrice: number

```

H

routes/resetPassword.ts  
(Line 37)

**S2004**

Refactor this code to not nest functions more than 4 levels deep.

#### ■ Problematic Code:

```

34:         }).then((data: SecurityAnswerModel | null) => {
35:             if ((data != null) && security.hmac(answer) === data.answer) {
36:                 UserModel.findByPk(data.UserId).then((user: UserModel | null) => {
>>> 37:                     user?.update({ password: newPassword }).then((user: UserModel) => {
38:                         verifySecurityAnswerChallenges(user, answer)
39:                         res.json({ user })
40:                     }).catch((error: unknown) => {

```

H

routes/resetPassword.ts  
(Line 40)

**S2004**

Refactor this code to not nest functions more than 4 levels deep.

#### ■ Problematic Code:

```

37:         user?.update({ password: newPassword }).then((user: UserModel) => {
38:             verifySecurityAnswerChallenges(user, answer)
39:             res.json({ user })
>>> 40:         }).catch((error: unknown) => {
41:             next(error)
42:         })
43:         }).catch((error: unknown) => {

```

H

routes/vulnCodeSnippet.ts  
(Line 70)

**S3776**





Refactor this function to reduce its Cognitive Complexity from 20 to the 15 allowed.

<p>■ <b>Problematic Code:</b></p> <pre> 67:   return notOkLines.length === 0 68: } 69: &gt;&gt;&gt; 70: export const checkVulnLines = () =&gt; async (req: Request&lt;Record&lt;string, unknown&gt;, Record&lt;string, unknown&gt;, VerdictRequestBody&gt;, res: Response, next: NextFunction) =&gt; { 71:   const key = req.body.key 72:   let snippetData 73:   try { </pre>		
<div>H</div>	test/server/verifySpec.ts (Line 216)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 213:   describe('"changeProductChallenge"', () =&gt; { 214:     beforeEach(() =&gt; { 215:       challenges.changeProductChallenge = { solved: false, save } as unknown as Challenge &gt;&gt;&gt; 216:       products.osaft = { reload () { return { then (cb: any) { cb() } } } } as unknown as Product 217:     }) 218: 219:     it(`is solved when the link in the O-Saft product goes to \${config.get&lt;string&gt;('challenges.overrideUrlForProductTamperingChallenge')}`, () =&gt; { </pre>		
<div>H</div>	routes/nftMint.ts (Line 19)	<b>S3735</b> Remove this use of the "void" operator.
<p>■ <b>Problematic Code:</b></p> <pre> 16:   const provider = new WebSocketProvider('wss://eth-sepolia.g.alchemy.com/v2/FZDapFZSs1l6yhHW4VnQqsi18qSd-3GJ') 17:   const contract = new Contract(nftAddress, nftABI, provider) 18:   if (!isEventListenerCreated) { &gt;&gt;&gt; 19:     void contract.on('NFTMinted', (minter: string) =&gt; { 20:       if (!addressesMinted.has(minter)) { 21:         addressesMinted.add(minter) 22:       } </pre>		
<div>H</div>	routes/web3Wallet.ts (Line 21)	<b>S3735</b> Remove this use of the "void" operator.
<p>■ <b>Problematic Code:</b></p> <pre> 18:   const provider = new WebSocketProvider('wss://eth-sepolia.g.alchemy.com/v2/FZDapFZSs1l6yhHW4VnQqsi18qSd-3GJ') 19:   const contract = new Contract(web3WalletAddress, web3WalletABI, provider) 20:   if (!isEventListenerCreated) { &gt;&gt;&gt; 21:     void contract.on('ContractExploited', (exploiter: string) =&gt; { 22:       if (walletsConnected.has(exploiter)) { 23:         walletsConnected.delete(exploiter) 24:         challengeUtils.solveIf(challenges.web3WalletChallenge, () =&gt; true) </pre>		
<div>H</div>	routes/profileImageUrlUpload.ts (Line 17)	<b>S3776</b> Refactor this function to reduce its Cognitive Complexity from 19 to the 15 allowed.

<p>■ <b>Problematic Code:</b></p> <pre> 14: import logger from '../lib/logger' 15: 16: export function profileImageUrlUpload () { &gt;&gt;&gt; 17:   return async (req: Request, res: Response, next: NextFunction) =&gt; { 18:     if (req.body.imageUrl !== undefined) { 19:       const url = req.body.imageUrl 20:       if (url.match(/(.)*solve\/challenges\/server-side(.)*\/) !== null) req.app.locals.abused_ssrf_bug = true </pre>		
H	test/server/blueprintSpec.ts (Line 35)	<b>S3776</b> Refactor this function to reduce its Cognitive Complexity from 23 to the 15 allowed.
<p>■ <b>Problematic Code:</b></p> <pre> 32:   let pathToImage: string = 'assets/public/images/products/' 33: 34:   describe('checkExifData', () =&gt; { &gt;&gt;&gt; 35:     it('should contain properties from exifForBlueprintChallenge', async () =&gt; { 36:       for (const product of products) { 37:         if (product.fileForRetrieveBlueprintChallenge &amp;&amp; product.image) { 38:           if (utils.isUrl(product.image)) { </pre>		
H	rsn/rsnUtil.ts (Line 47)	<b>S3776</b> Refactor this function to reduce its Cognitive Complexity from 31 to the 15 allowed.
<p>■ <b>Problematic Code:</b></p> <pre> 44:   }, {}) 45:   for (const val of keys) { 46:     await retrieveCodeSnippet(val.split('_')[0]) &gt;&gt;&gt; 47:     .then(snippet =&gt; { 48:       if (snippet == null) return 49:       process.stdout.write(val + ': ') 50:       const fileData = fs.readFileSync(fixesPath + '/' + val).toString() </pre>		
H	routes/fileUpload.ts (Line 108)	<b>S3776</b> Refactor this function to reduce its Cognitive Complexity from 18 to the 15 allowed.
<p>■ <b>Problematic Code:</b></p> <pre> 105:   next() 106: } 107: &gt;&gt;&gt; 108: function handleYamlUpload ({ file }: Request, res: Response, next: NextFunction) { 109:   if (utils.endsWith(file?.originalname.toLowerCase(), '.yaml')    utils.endsWith(file?.originalname.toLowerCase(), '.yaml')) { 110:     challengeUtils.solveIf(challenges.deprecatedInterfaceChallenge, () =&gt; { return true }) 111:     if (((file?.buffer) != null) &amp;&amp; utils.isChallengeEnabled(challenges.deprecatedInterfaceChallenge)) { </pre>		
H	test/cypress/e2e/chatbot.spec.ts (Line 45)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.





<p>■ <b>Problematic Code:</b></p> <pre> 42:         cy.get('#message-input').type('hi').type('{enter}') 43:         cy.get('#message-input').type('...').type('{enter}') 44: &gt;&gt;&gt; 45:         const genArr = Array.from({ length: 100 }, (v, k) =&gt; k + 1) 46:         cy.wrap(genArr).eachSeries(() =&gt; { 47:             cy.get('#message-input') 48:                 .type(couponIntent.utterances[0]) </pre>		
<div>H</div>	frontend/src/app/about about.component.ts (Line 76)	<b>S3776</b> Refactor this function to reduce its Cognitive Complexity from 17 to the 15 allowed.
<p>■ <b>Problematic Code:</b></p> <pre> 73:         console.error(err) 74:         return EMPTY 75:     }) &gt;&gt;&gt; 76:     ).subscribe((config) =&gt; { 77:         if (config?.application?.social) { 78:             if (config.application.social.blueSkyUrl) { 79:                 this.blueSkyUrl = config.application.social.blueSkyUrl </pre>		
<div>H</div>	test/cypress/e2e/geoStalking.spec.ts (Line 11)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 8:         it('Should be possible to find the answer to a security question in the meta-data of a photo on the photo wall', () =&gt; { 9:             cy.task&lt;string&gt;('GetFromMemories', 'geoStalkingMetaSecurityAnswer').then( 10:                 (answer: string) =&gt; { &gt;&gt;&gt; 11:                 cy.task&lt;string&gt;('GetFromConfig', 'application.domain').then((appDomain: string) =&gt; { 12:                     cy.get('#email').type(`john@\${appDomain}`) 13:                     cy.wait('@securityQuestion') 14:                     cy.get('#securityAnswer').should('not.be.disabled').focus().type(answer) </pre>		
<div>H</div>	test/cypress/e2e/geoStalking.spec.ts (Line 30)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 27:         it('Should be possible to determine the answer to a security question by looking closely at an image on the photo wall', () =&gt; { 28:             cy.task&lt;string&gt;('GetFromMemories', 'geoStalkingVisualSecurityAnswer').then( 29:                 (answer: string) =&gt; { &gt;&gt;&gt; 30:                 cy.task&lt;string&gt;('GetFromConfig', 'application.domain').then((appDomain: string) =&gt; { 31:                     cy.get('#email').type(`emma@\${appDomain}`) 32:                     cy.wait('@securityQuestion') 33:                     cy.get('#securityAnswer').should('not.be.disabled').focus().type(answer) </pre>		
<div>H</div>	test/cypress/e2e/restApi.spec.ts (Line 51)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<p>■ <b>Problematic Code:</b></p> <pre> 48:   describe('challenge "changeProduct"', () =&gt; { 49:     it('should be possible to change product via PUT request without being logged in', () =&gt; { 50:       cy.task&lt;number&gt;('GetTamperingProductId').then((tamperingProductId: number) =&gt; { &gt;&gt;&gt; 51:         cy.task&lt;string&gt;('GetOverwriteUrl').then((overwriteUrl: string) =&gt; { 52:           cy.window().then(async () =&gt; { 53:             const response = await fetch( 54:               `\${Cypress.config('baseUrl')}/api/Products/\${tamperingProductId}`, </pre>		
H	test/cypress/e2e/b2bOrder.spec.ts (Line 8)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 5:       if (!isDocker) { 6:         cy.login({ email: 'admin', password: 'admin123' }) 7: &gt;&gt;&gt; 8:         cy.window().then(async () =&gt; { 9:           const response = await fetch( 10:            `\${Cypress.config('baseUrl')}/b2b/v2/orders/`, 11:            { </pre>		
H	test/cypress/e2e/b2bOrder.spec.ts (Line 38)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 35:     cy.task('isDocker').then((isDocker) =&gt; { 36:       if (!isDocker) { 37:         cy.login({ email: 'admin', password: 'admin123' }) &gt;&gt;&gt; 38:         cy.window().then(async () =&gt; { 39:           const response = await fetch( 40:             `\${Cypress.config('baseUrl')}/b2b/v2/orders/`, 41:             { </pre>		
H	test/cypress/e2e/complain.spec.ts (Line 158)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 155:         cy.get('#submitButton').click() 156:         cy.visit('/promotion') 157: &gt;&gt;&gt; 158:         cy.on('window:alert', (t) =&gt; { 159:           expect(t).to.equal('xss') 160:         }) 161:         cy.visit('/') </pre>		
H	test/cypress/e2e/contact.spec.ts (Line 64)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<p>■ <b>Problematic Code:</b></p> <pre> 61:         cy.get('#submitButton').click({ force: true }) // FIXME Analyze Cypress recordings to properly fix behavior during test 62: 63:         cy.visit('/#/about') &gt;&gt;&gt; 64:         cy.on('window:alert', (t) =&gt; { 65:             expect(t).to.equal('xss') 66:         }) 67: </pre>		
	test/cypress/e2e/contact.spec.ts (Line 69)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 66:         }) 67: 68:         cy.visit('/#/administration') &gt;&gt;&gt; 69:         cy.on('window:alert', (t) =&gt; { 70:             expect(t).to.equal('xss') 71:         }) 72:         cy.expectChallengeSolved({ challenge: 'Server-side XSS Protection' }) </pre>		
	test/cypress/e2e/forgedJwt.spec.ts (Line 19)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 16:         it('should accept a token HMAC-signed with public RSA key with email rsa_lord@juice-sh.op in the payload ', () =&gt; { 17:             cy.task('isWindows').then((isWindows) =&gt; { 18:                 if (!isWindows) { &gt;&gt;&gt; 19:                     cy.window().then(() =&gt; { 20:                         localStorage.setItem( 21:                             'token', 22:                             'eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJkYXRhIjp7ImVtYWlsIjoicnNhX2xvcm RAanVpY2Utc2gub3AifSwiaWF0IjoxNTgzMDM3NzExfQ.gShXDT5TrE5736mpIbfVDEcQbLfteJaQUg7Z0PH8Xc8' </pre>		
	test/cypress/e2e/noSql.spec.ts (Line 13)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 10:         it('should be possible to inject a command into the get route', () =&gt; { 11:             cy.task('isDocker').then((isDocker) =&gt; { 12:                 if (!isDocker) { &gt;&gt;&gt; 13:                     cy.window().then(() =&gt; { 14:                         void fetch( 15:                             `\${Cypress.config('baseUrl')}/rest/products/sleep(1000)/reviews`, 16:                             { </pre>		
	test/cypress/e2e/noSql.spec.ts (Line 34)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.







<b>■ Problematic Code:</b> <pre> 31:     it('should be possible to inject and get all the orders', () =&gt; { 32:         cy.task('isDocker').then((isDocker) =&gt; { 33:             if (!isDocker) { &gt;&gt;&gt; 34:                 cy.window().then(async () =&gt; { 35:                     await fetch( 36:                         `\${Cypress.config('baseUrl')}/rest/track-order/%27%20%7C%7C%20true%20%7C%7C%20%27`, 37:                     { </pre>		
<b>H</b>	test/cypress/e2e/profile.spec.ts (Line 30)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 27:         cy.get('#username').type('&lt;a ascript&gt;alert(`xss`)&lt;/script&gt;') 28:         cy.get('#submit').click() 29: &gt;&gt;&gt; 30:         cy.on('window:alert', (t) =&gt; { 31:             expect(t).to.equal('xss') 32:         }) 33: </pre>		
<b>H</b>	test/cypress/e2e/register.spec.ts (Line 17)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 14:     it('should be possible to bypass validation by directly using Rest API', async () =&gt; { 15:         cy.task('isDocker').then((isDocker) =&gt; { 16:             if (!isDocker) { &gt;&gt;&gt; 17:                 cy.window().then(async () =&gt; { 18:                     const response = await fetch( 19:                         `\${Cypress.config('baseUrl')}/api/Users/`, 20:                     { </pre>		
<b>H</b>	test/cypress/e2e/register.spec.ts (Line 40)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 37:         }) 38: 39:         cy.visit('/#/administration') &gt;&gt;&gt; 40:         cy.on('window:alert', (t) =&gt; { 41:             expect(t).to.equal('xss') 42:         }) 43:         cy.expectChallengeSolved({ challenge: 'Client-side XSS Protection' }) </pre>		
<b>H</b>	test/cypress/e2e/restApi.spec.ts (Line 12)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<b>■ Problematic Code:</b> <pre> 9:     xit('should be possible to create a new product when logged in', () =&gt; { 10:         cy.task('isDocker').then((isDocker) =&gt; { 11:             if (!isDocker) { &gt;&gt;&gt; 12:                 cy.window().then(async () =&gt; { 13:                     const response = await fetch( 14:                         `\${Cypress.config('baseUrl')}/api/Products`, 15:                     { </pre>		
	test/cypress/e2e/restApi.spec.ts (Line 38)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 35:         cy.reload() 36:         cy.get('img[alt="RestXSS"]').click() 37: &gt;&gt;&gt; 38:         cy.on('window:alert', (t) =&gt; { 39:             expect(t).to.equal('xss') 40:         }) 41: </pre>		
	test/cypress/e2e/restApi.spec.ts (Line 89)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 86:     it('should be possible to save log-in IP when logged in', () =&gt; { 87:         cy.task('isDocker').then((isDocker) =&gt; { 88:             if (!isDocker) { &gt;&gt;&gt; 89:                 cy.window().then(async () =&gt; { 90:                     const response = await fetch( 91:                         `\${Cypress.config('baseUrl')}/rest/saveLoginIp`, 92:                     { </pre>		
	test/cypress/e2e/trackOrder.spec.ts (Line 7)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 4:     xit('Order Id should be susceptible to reflected XSS attacks', () =&gt; { 5:         cy.task('isDocker').then((isDocker) =&gt; { 6:             if (!isDocker) { &gt;&gt;&gt; 7:                 cy.on('uncaught:exception', (_err, _runnable) =&gt; { 8:                     return false 9:                 }) 10: </pre>		
	test/cypress/e2e/trackOrder.spec.ts (Line 15)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<p>■ <b>Problematic Code:</b></p> <pre> 12:         cy.visit('/#/track-result?id=&lt;iframe src="javascript:alert(`xss`)"&gt;') 13:         cy.reload() 14: &gt;&gt;&gt; 15:         cy.on('window:alert', (t) =&gt; { 16:             expect(t).to.equal('xss') 17:         }) 18: </pre>		
H	routes/fileUpload.ts (Line 75)	<b>S3776</b> Refactor this function to reduce its Cognitive Complexity from 18 to the 15 allowed.
<p>■ <b>Problematic Code:</b></p> <pre> 72:     next() 73: } 74: &gt;&gt;&gt; 75: function handleXmlUpload ({ file }: Request, res: Response, next: NextFunction) { 76:     if (utils.endsWith(file?.originalname.toLowerCase(), '.xml')) { 77:         challengeUtils.solveIf(challenges.deprecatedInterfaceChallenge, () =&gt; { return true 78: 79:         if (((file?.buffer) != null) &amp;&amp; utils.isChallengeEnabled(challenges.deprecatedInterfaceChallenge)) { // XXE attacks in Docker/Heroku containers regularly cause "segfault" crashes </pre>		
H	routes/search.ts (Line 47)	<b>S3735</b> Remove this use of the "void" operator.
<p>■ <b>Problematic Code:</b></p> <pre> 44:         } 45:         if (challengeUtils.notSolved(challenges.dbSchemaChallenge)) { 46:             let solved = true &gt;&gt;&gt; 47:             void models.sequelize.query('SELECT sql FROM sqlite_master').then(([data]: any) =&gt; { 48:                 const tableDefinitions = utils.queryResultToJson(data) 49:                 if (tableDefinitions.data?.length) { 50:                     for (let i = 0; i &lt; tableDefinitions.data.length; i++) { </pre>		
H	data/datacache.ts (Line 33)	<b>S6861</b> Exporting mutable 'let' binding, use 'const' instead.
<p>■ <b>Problematic Code:</b></p> <pre> 30: } 31: export const notifications: Notification[] = [] 32: &gt;&gt;&gt; 33: export let retrieveBlueprintChallengeFile: string   null = null 34: export function setRetrieveBlueprintChallengeFile (retrieveBlueprintChallengeFileArg: string) { 35:     retrieveBlueprintChallengeFile = retrieveBlueprintChallengeFileArg 36: } </pre>		
H	test/cypress/e2e/scoreBoard.spec.ts (Line 45)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<p>■ <b>Problematic Code:</b></p> <pre> 42:         ) 43: 44:         cy.get('@showSolvedNotifications').then((showSolvedNotifications) =&gt; { &gt;&gt;&gt; 45:             cy.get('@showFlagsInNotifications').then((showFlagsInNotifications) =&gt; { 46:                 if (showSolvedNotifications &amp;&amp; showFlagsInNotifications) { 47:                     cy.get('.challenge-solved-toast').then((arrayOfSolvedToasts) =&gt; { 48:                         const alertsBefore = Cypress.\$(arrayOfSolvedToasts).length </pre>		
<p><b>H</b></p>	<p>test/cypress/e2e/basket.spec.ts (Line 80)</p>	<p><b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 77:         }) 78:         describe('challenge "manipulateClock"', () =&gt; { 79:             it('should be possible to enter WMNSDY2019 coupon &amp; place order with this expired coupon', () =&gt; { &gt;&gt;&gt; 80:                 cy.window().then(() =&gt; { 81:                     window.localStorage.couponPanelExpanded = false 82:                 }) 83:                 cy.visit('/#/payment/shop') </pre>		
<p><b>H</b></p>	<p>test/cypress/e2e/basket.spec.ts (Line 85)</p>	<p><b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 82:         }) 83:         cy.visit('/#/payment/shop') 84: &gt;&gt;&gt; 85:         cy.window().then((win) =&gt; { 86:             cy.on('uncaught:exception', (_err, _runnable) =&gt; { 87:                 // Introduced to disable the uncaught:exception we get after the eval under this as TypeError: Date.now is not a function 88:                 return false </pre>		
<p><b>H</b></p>	<p>test/cypress/e2e/basket.spec.ts (Line 141)</p>	<p><b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 138: 139:         cy.visit('/#/payment/shop') 140:         cy.get('#collapseCouponElement').click() &gt;&gt;&gt; 141:         cy.task&lt;string&gt;('GenerateCoupon', 90).then((coupon: string) =&gt; { 142:             cy.get('#coupon').type(coupon) 143:             cy.get('#applyCouponButton').click() 144:         }) </pre>		
<p><b>H</b></p>	<p>test/cypress/e2e/search.spec.ts (Line 64)</p>	<p><b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.</p>

<p>■ <b>Problematic Code:</b></p> <pre> 61:      cy.request("/rest/products/search?q=''))--") 62:      .its('body') 63:      .then((sourceContent) =&gt; { &gt;&gt;&gt; 64:      cy.task&lt;Product&gt;('GetPastebinLeakProduct').then((pastebinLeakProduct: Product) =&gt; { 65:          let foundProduct = false 66: 67:          sourceContent.data.forEach((product: Product) =&gt; { </pre>		
<div>H</div>	test/cypress/e2e/search.spec.ts (Line 91)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 88:      cy.request("/rest/products/search?q=''))--") 89:      .its('body') 90:      .then((sourceContent) =&gt; { &gt;&gt;&gt; 91:      cy.task&lt;Product&gt;('GetChristmasProduct').then((christmasProduct: Product) =&gt; { 92:          let foundProduct = false 93: 94:          sourceContent.data.forEach((product: Product) =&gt; { </pre>		
<div>H</div>	test/cypress/e2e/search.spec.ts (Line 109)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 106:     cy.request('/api/products') 107:     .its('body') 108:     .then((sourceContent) =&gt; { &gt;&gt;&gt; 109:     cy.task&lt;Product&gt;('GetChristmasProduct').then((christmasProduct: Product) =&gt; { 110:         sourceContent.data.forEach((product: Product) =&gt; { 111:             if (product.name === christmasProduct.name) { 112:                 cy.window().then(async () =&gt; { </pre>		
<div>H</div>	test/cypress/e2e/totpSetup.spec.ts (Line 33)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 30:         // console.log(\$val); 31:         cy.get('#currentPasswordSetup').type('K1f.....') 32: &gt;&gt;&gt; 33:         cy.task&lt;string&gt;('GenerateAuthenticator', \$val).then((secret: string) =&gt; { 34:             cy.get('#initialToken').type(secret) 35:             cy.get('#setupTwoFactorAuth').click() 36: </pre>		
<div>H</div>	routes/metrics.ts (Line 209)	<b>S3735</b> Remove this use of the "void" operator.

<p>■ <b>Problematic Code:</b></p> <pre> 206:         if (count) userMetrics.set({ type: 'deluxe' }, count) 207:     }) 208: &gt;&gt;&gt; 209:     void UserModel.count().then((count: number) =&gt; { 210:         if (count) userTotalMetrics.set(count) 211:     }) 212: </pre>		
	routes/metrics.ts (Line 213)	<p><b>S3735</b>                  Remove this use of the "void" operator.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 210:         if (count) userTotalMetrics.set(count) 211:     }) 212: &gt;&gt;&gt; 213:     void WalletModel.sum('balance').then((totalBalance: number) =&gt; { 214:         if (totalBalance) walletMetrics.set(totalBalance) 215:     }) 216: </pre>		
	routes/chatbot.ts (Line 50)	<p><b>S3776</b>                  Refactor this function to reduce its Cognitive Complexity from 18 to the 15 allowed.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 47: 48: void initializeChatbot() 49: &gt;&gt;&gt; 50: async function processQuery (user: User, req: Request, res: Response, next: NextFunction) { 51:     if (bot == null) { 52:         res.status(503).send() 53:         return </pre>		
	routes/order.ts (Line 37)	<p><b>S3776</b>                  Refactor this function to reduce its Cognitive Complexity from 34 to the 15 allowed.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 34:     return (req: Request, res: Response, next: NextFunction) =&gt; { 35:         const id = req.params.id 36:         BasketModel.findOne({ where: { id }, include: [{ model: ProductModel, paranoid: false, as: 'Products' }] }) &gt;&gt;&gt; 37:         .then(async (basket: BasketModel   null) =&gt; { 38:             if (basket != null) { 39:                 const customer = security.authenticatedUsers.from(req) 40:                 const email = customer ? customer.data ? customer.data.email : '' : '' </pre>		
	frontend/src/app/web3-sandbox web3-sandbox.component.ts (Line 190)	<p><b>S3776</b>                  Refactor this function to reduce its Cognitive Complexity from 16 to the 15 allowed.</p>

<b>■ Problematic Code:</b> <pre> 187:     } 188:   } 189: &gt;&gt;&gt; 190:   async invokeFunction (func) { 191:     if (!this.session) { 192:       this.snackBarHelperService.open('PLEASE_CONNECT_WEB3_WALLET', 'errorBar') 193:       return </pre>		
<b>H</b>	routes/chatbot.ts (Line 25)	<b>S6861</b> Exporting mutable 'let' binding, use 'const' instead.
<b>■ Problematic Code:</b> <pre> 22: 23: let trainingFile = config.get&lt;string&gt;('application.chatBot.trainingData') 24: let testCommand: string &gt;&gt;&gt; 25: export let bot: Bot   null = null 26: 27: export async function initializeChatbot () { 28:   if (utils.isUrl(trainingFile)) { </pre>		
<b>H</b>	test/cypress/e2e/chatbot.spec.ts (Line 46)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 43:         cy.get('#message-input').type('...').type('{enter}') 44: 45:         const genArr = Array.from({ length: 100 }, (v, k) =&gt; k + 1) &gt;&gt;&gt; 46:         cy.wrap(genArr).eachSeries(() =&gt; { 47:           cy.get('#message-input') 48:             .type(couponIntent.utterances[0]) 49:             .type('{enter}') </pre>		
<b>H</b>	test/cypress/e2e/basket.spec.ts (Line 9)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 6: 7:   describe('challenge "negativeOrder"', () =&gt; { 8:     it('should be possible to update a basket to a negative quantity via the Rest API', () =&gt; { &gt;&gt;&gt; 9:       cy.window().then(async () =&gt; { 10:         const response = await fetch( 11:           `\${Cypress.config('baseUrl')}/api/BasketItems/1`, 12:           { </pre>		
<b>H</b>	test/cypress/e2e/basket.spec.ts (Line 30)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<b>■ Problematic Code:</b> <pre> 27: 28:         cy.get('mat-cell.mat-column-quantity &gt; span') 29:             .first() &gt;&gt;&gt; 30:         .then((\$ele) =&gt; { 31:             const quantity = \$ele.text() 32:             expect(quantity).toMatch(/-100000/) 33:         }) </pre>		
<b>H</b>	test/cypress/e2e/basket.spec.ts (Line 45)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 42: 43:         describe('challenge "basketAccessChallenge"', () =&gt; { 44:             it('should access basket with id from session storage instead of the one associated to logged-in user', () =&gt; { &gt;&gt;&gt; 45:                 cy.window().then(() =&gt; { 46:                     window.sessionStorage.bid = 3 47:                 }) 48:             }) </pre>		
<b>H</b>	test/cypress/e2e/basket.spec.ts (Line 58)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 55: 56:         describe('challenge "basketManipulateChallenge"', () =&gt; { 57:             it('should manipulate basket of other user instead of the one associated to logged-in user', () =&gt; { &gt;&gt;&gt; 58:                 cy.window().then(async () =&gt; { 59:                     await fetch(`\${Cypress.config('baseUrl')}/api/BasketItems/`, { 60:                         method: 'POST', 61:                         cache: 'no-cache', </pre>		
<b>H</b>	test/cypress/e2e/basket.spec.ts (Line 111)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 108:         }) 109: 110:         it('should be possible to add a product in the basket', () =&gt; { &gt;&gt;&gt; 111:             cy.window().then(async () =&gt; { 112:                 const response = await fetch( 113:                     `\${Cypress.config('baseUrl')}/api/BasketItems/`, 114:                     { </pre>		
<b>H</b>	test/cypress/e2e/basket.spec.ts (Line 135)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.







<b>■ Problematic Code:</b> <pre> 132:         }) 133: 134:         it('should be possible to enter a coupon that gives an 80% discount', () =&gt; { &gt;&gt;&gt; 135:             cy.window().then(() =&gt; { 136:                 window.localStorage.couponPanelExpanded = false 137:             }) 138:         }) </pre>		
	test/cypress/e2e/contact.spec.ts (Line 154)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 151:         await sendPostRequest(responseJson) 152:     } 153: &gt;&gt;&gt; 154:     async function sendPostRequest (captcha: { 155:         captchaId: number 156:         answer: string 157:     }) { </pre>		
	test/cypress/e2e/contact.spec.ts (Line 202)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 199:         await sendPostRequest(responseJson) 200:     } 201: &gt;&gt;&gt; 202:     async function sendPostRequest (captcha: { 203:         captchaId: number 204:         answer: string 205:     }) { </pre>		
	test/cypress/e2e/deluxe.spec.ts (Line 29)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 26:         url: '/rest/deluxe-membership', 27:         method: 'POST', 28:         headers: { Authorization: `Bearer \${token?.value}` } &gt;&gt;&gt; 29:     }).then((response) =&gt; { 30:         expect(response.body.status).contains('success') 31:     }) 32: }) </pre>		
	test/cypress/e2e/forgotPassword.spec.ts (Line 54)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<b>■ Problematic Code:</b> <pre> 51:     describe('for his internal account', () =&gt; { 52:         it('should be able to reset password with his security answer', () =&gt; { 53:             cy.task&lt;string&gt;('GetFromConfig', 'application.domain').then( &gt;&gt;&gt; 54:                 (appDomain: string) =&gt; { 55:                     cy.get('#email').type(`bjoern@\${appDomain}`) 56:                 } 57:             ) </pre>		
	test/cypress/e2e/login.spec.ts (Line 128)	<b>S3735</b> Remove this use of the "void" operator.
<b>■ Problematic Code:</b> <pre> 125: 126:     cy.task&lt;string&gt;('GenerateAuthenticator', 'IFTXE3SPOEYVURT2MRYGI52TKJ4HC3KH').then( 127:         (totpToken: string) =&gt; { &gt;&gt;&gt; 128:             void cy.get('#totpToken').type(totpToken) 129:             void cy.get('#totpSubmitButton').click() 130:         } 131:     ) </pre>		
	test/cypress/e2e/login.spec.ts (Line 129)	<b>S3735</b> Remove this use of the "void" operator.
<b>■ Problematic Code:</b> <pre> 126:     cy.task&lt;string&gt;('GenerateAuthenticator', 'IFTXE3SPOEYVURT2MRYGI52TKJ4HC3KH').then( 127:         (totpToken: string) =&gt; { 128:             void cy.get('#totpToken').type(totpToken) &gt;&gt;&gt; 129:             void cy.get('#totpSubmitButton').click() 130:         } 131:     ) 132:     cy.expectChallengeSolved({ challenge: 'Two Factor Authentication' }) </pre>		
	test/cypress/e2e/noSql.spec.ts (Line 14)	<b>S3735</b> Remove this use of the "void" operator.
<b>■ Problematic Code:</b> <pre> 11:     cy.task('isDocker').then((isDocker) =&gt; { 12:         if (!isDocker) { 13:             cy.window().then(() =&gt; { &gt;&gt;&gt; 14:                 void fetch( 15:                     `\${Cypress.config('baseUrl')}/rest/products/sleep(1000)/reviews`, 16:                     { 17:                         method: 'GET', </pre>		
	test/cypress/e2e/noSql.spec.ts (Line 97)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<p>■ <b>Problematic Code:</b></p> <pre> 94:         await editReview(reviewId) 95:     } 96: &gt;&gt;&gt; 97:     async function editReview (reviewId: string) { 98:         const response = await fetch( 99:             `\${Cypress.config('baseUrl')}/rest/products/reviews`, 100:         { </pre>		
H	test/cypress/e2e/noSql.spec.ts (Line 126)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 123:     it('should be possible to like reviews multiple times', () =&gt; { 124:         cy.visit('/') 125:         cy.window().then(async () =&gt; { &gt;&gt;&gt; 126:             async function sendPostRequest (reviewId: string) { 127:                 const anotherResponse = await fetch( 128:                     `\${Cypress.config('baseUrl')}/rest/products/reviews`, 129:                 { </pre>		
H	data/datacreator.ts (Line 406)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 403:         product: id, 404:         likesCount: 0, 405:         likedBy: [] &gt;&gt;&gt; 406:     }).catch((err: unknown) =&gt; { 407:         logger.error(`Could not insert Product Review \${text}: \${utils.getErrorMessage(err)}`) 408:     }) 409:     ) </pre>		
H	routes/metrics.ts (Line 201)	<b>S3735</b> Remove this use of the "void" operator.
<p>■ <b>Problematic Code:</b></p> <pre> 198:         if (reviewCount) interactionsMetrics.set({ type: 'review' }, reviewCount) 199:     }) 200: &gt;&gt;&gt; 201:     void UserModel.count({ where: { role: { [Op.eq]: 'customer' } } }).then((count: number) =&gt; { 202:         if (count) userMetrics.set({ type: 'standard' }, count) 203:     }) 204: </pre>		
H	routes/metrics.ts (Line 205)	<b>S3735</b> Remove this use of the "void" operator.

<p>■ <b>Problematic Code:</b></p> <pre> 202:         if (count) userMetrics.set({ type: 'standard' }, count) 203:     }) 204: &gt;&gt;&gt; 205:     void UserModel.count({ where: { role: { [Op.eq]: 'deluxe' } } }).then((count: number) =&gt; { 206:         if (count) userMetrics.set({ type: 'deluxe' }, count) 207:     }) 208: </pre>		
	routes/metrics.ts (Line 217)	<b>S3735</b> Remove this use of the "void" operator.
<p>■ <b>Problematic Code:</b></p> <pre> 214:         if (totalBalance) walletMetrics.set(totalBalance) 215:     }) 216: &gt;&gt;&gt; 217:     void FeedbackModel.count().then((count: number) =&gt; { 218:         if (count) interactionsMetrics.set({ type: 'feedback' }, count) 219:     }) 220: </pre>		
	routes/metrics.ts (Line 221)	<b>S3735</b> Remove this use of the "void" operator.
<p>■ <b>Problematic Code:</b></p> <pre> 218:         if (count) interactionsMetrics.set({ type: 'feedback' }, count) 219:     }) 220: &gt;&gt;&gt; 221:     void ComplaintModel.count().then((count: number) =&gt; { 222:         if (count) interactionsMetrics.set({ type: 'complaint' }, count) 223:     }) 224:     } catch (e: unknown) { </pre>		
	routes/fileUpload.ts (Line 49)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<p>■ <b>Problematic Code:</b></p> <pre> 46:         } else { 47:             entry.autodrain() 48:         } &gt;&gt;&gt; 49:     }).on('error', function (err: unknown) { next(err) }) 50:     }) 51:     }) 52:     }) </pre>		
	routes/order.ts (Line 48)	<b>S3735</b> Remove this use of the "void" operator.

<b>■ Problematic Code:</b> <pre> 45:         const fileWriter = doc.pipe(fs.createWriteStream(path.join('ftp/', pdfFile))) 46: 47:         fileWriter.on('finish', async () =&gt; { &gt;&gt;&gt; 48:             void basket.update({ coupon: null }) 49:             await BasketItemModel.destroy({ where: { BasketId: id } }) 50:             res.json({ orderConfirmation: orderId }) 51:         }) </pre>		
	routes/verify.ts (Line 175)	<b>S3735</b> Remove this use of the "void" operator.
<b>■ Problematic Code:</b> <pre> 172: 173: function changeProductChallenge (osoft: Product) { 174:     let urlForProductTamperingChallenge: string   null = null &gt;&gt;&gt; 175:     void osoft.reload().then(() =&gt; { 176:         for (const product of config.get&lt;ProductConfig[]&gt;('products')) { 177:             if (product.urlForProductTamperingChallenge !== undefined) { 178:                 urlForProductTamperingChallenge = product.urlForProductTamperingChallenge </pre>		
	routes/fileUpload.ts (Line 40)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 37:         fs.close(fd, function () { 38:             fs.createReadStream(tempFile) 39:                 .pipe(unzipper.Parse()) &gt;&gt;&gt; 40:                 .on('entry', function (entry: any) { 41:                     const fileName = entry.path 42:                     const absolutePath = path.resolve('uploads/complaints/' + fileName) 43:                     challengeUtils.solveIf(challenges.fileWriteChallenge, () =&gt; { return absolutePath === path.resolve('ftp/legal.md') }) }) </pre>		
	test/server/verifySpec.ts (Line 168)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<b>■ Problematic Code:</b> <pre> 165:     describe('is solved when an error occurs on a response with error', () =&gt; { 166:         const httpStatus = [402, 403, 404, 500] 167:         httpStatus.forEach(statusCode =&gt; { &gt;&gt;&gt; 168:             it(`\${statusCode} status code`, () =&gt; { 169:                 res.statusCode = statusCode 170:                 err = new Error() 171: </pre>		
	test/server/verifySpec.ts (Line 191)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<p>■ <b>Problematic Code:</b></p> <pre> 188:     describe('is not solved when no error occurs on a response with error', () =&gt; { 189:         const httpStatus = [401, 402, 404, 500] 190:         httpStatus.forEach(statusCode =&gt; { &gt;&gt;&gt; 191:             it(`\${statusCode} status code`, () =&gt; { 192:                 res.statusCode = statusCode 193:                 err = undefined 194: </pre>		
<p><b>H</b></p>	<p>data/static/codefixes adminSectionChallenge_3.ts (Line 3)</p>	<p><b>S3504</b> Unexpected var, use let or const instead.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 1: const routes: Routes = [ 2:   { &gt;&gt;&gt; 3:     path: (function(){var t=Array.prototype.slice.call(arguments),G=t.shift();return t.reverse().map(function(e,w){return String.fromCharCode(e-G-2-w)}).join('')})(55,167,171,165,1 68,158,154)+(62749278960).toString(36).toLowerCase()+((function(){var b=Array.prototype.slice.call(arguments),V=b.shift();return b.reverse().map(function(l,S){return String.fromCharCode(l-V-43-S)}).join('')})(58,211), 4:     component: AdministrationComponent, 5:     canActivate: [AuthGuard] 6:   }, </pre>		
<p><b>H</b></p>	<p>data/static/codefixes adminSectionChallenge_3.ts (Line 3)</p>	<p><b>S3504</b> Unexpected var, use let or const instead.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 1: const routes: Routes = [ 2:   { &gt;&gt;&gt; 3:     path: (function(){var t=Array.prototype.slice.call(arguments),G=t.shift();return t.reverse().map(function(e,w){return String.fromCharCode(e-G-2-w)}).join('')})(55,167,171,165,1 68,158,154)+(62749278960).toString(36).toLowerCase()+((function(){var b=Array.prototype.slice.call(arguments),V=b.shift();return b.reverse().map(function(l,S){return String.fromCharCode(l-V-43-S)}).join('')})(58,211), 4:     component: AdministrationComponent, 5:     canActivate: [AuthGuard] 6:   }, </pre>		
<p><b>H</b></p>	<p>test/api/dataExportApiSpec.ts (Line 218)</p>	<p><b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 215:         .expect('status', 200) 216:         .expect('header', 'content-type', /application\/json/) 217:         .expect('json', 'confirmation', 'Your data export will open in a new Browser window.') &gt;&gt;&gt; 218:         .then(({ json }) =&gt; { 219:             const parsedData = JSON.parse(json.userData) 220:             expect(parsedData.username).toBe('') 221:             expect(parsedData.email).toBe('jim@' + config.get&lt;string&gt;('application.domain')) </pre>		

<b>H</b>	test/api/dataExportApiSpec.ts (Line 352)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div data-bbox="159 324 1476 660"> <div>■ Problematic Code:</div> <pre> 349:         }) 350:         .expect('status', 200) 351:         .expect('header', 'content-type', /application\/json/) &gt;&gt;&gt; 352:         .then(({ json: captchaAnswer }) =&gt; { 353:             return frisby.post(REST_URL + '/user/data-export', { 354:                 headers: { Authorization: 'Bearer ' + jsonLogin.authentication.token, 'content-type': 'application/json' }, 355:                 body: { </pre> </div>		
<b>H</b>	test/api/dataExportApiSpec.ts (Line 98)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div data-bbox="159 750 1476 1086"> <div>■ Problematic Code:</div> <pre> 95:         .expect('status', 200) 96:         .expect('header', 'content-type', /application\/json/) 97:         .expect('json', 'confirmation', 'Your data export will open in a new Browser window.') &gt;&gt;&gt; 98:         .then(({ json }) =&gt; { 99:             const parsedData = JSON.parse(json.userData) 100:             expect(parsedData.username).toBe('bkimminich') 101:             expect(parsedData.email).toBe('bjoern.kimminich@gmail.com') </pre> </div>		
<b>H</b>	test/api/dataExportApiSpec.ts (Line 131)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div data-bbox="159 1176 1476 1545"> <div>■ Problematic Code:</div> <pre> 128:         .expect('status', 200) 129:         .expect('header', 'content-type', /application\/json/) 130:         .expect('json', 'confirmation', 'Your data export will open in a new Browser window.') &gt;&gt;&gt; 131:         .then(({ json }) =&gt; { 132:             const parsedData = JSON.parse(json.userData) 133:             expect(parsedData.username).toBe('') 134:             expect(parsedData.email).toBe('amy@' + config.get&lt;string&gt;('application.domain')) </pre> </div>		
<b>H</b>	test/api/dataExportApiSpec.ts (Line 249)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.
<div data-bbox="159 1635 1476 1971"> <div>■ Problematic Code:</div> <pre> 246:         }) 247:         .expect('status', 200) 248:         .expect('header', 'content-type', /application\/json/) &gt;&gt;&gt; 249:         .then(({ json: captchaAnswer }) =&gt; { 250:             return frisby.post(REST_URL + '/user/data-export', { 251:                 headers: { Authorization: 'Bearer ' + jsonLogin.authentication.token, 'content-type': 'application/json' }, 252:                 body: { </pre> </div>		
<b>H</b>	test/api/dataExportApiSpec.ts (Line 303)	<b>S2004</b> Refactor this code to not nest functions more than 4 levels deep.

<p>■ <b>Problematic Code:</b></p> <pre> 300:         .expect('status', 200) 301:         .expect('header', 'content-type', /application\/json/) 302:         .expect('json', 'confirmation', 'Your data export will open in a new Browser window.') &gt;&gt;&gt; 303:         .then(({ json }) =&gt; { 304:             const parsedData = JSON.parse(json.userData) 305:             expect(parsedData.username).toBe('') 306:             expect(parsedData.email).toBe('jim@' + config.get&lt;string&gt;('application.domain')) </pre>		
M	frontend/src/app/address address.component.scss (Line 72)	<b>S4666</b> Unexpected duplicate selector ".mat-column-Address", first used at line 63
<p>■ <b>Problematic Code:</b></p> <pre> 69:     width: 48px; 70: } 71: &gt;&gt;&gt; 72: .mat-column-Address { 73:     word-break: break-word; 74: } 75: </pre>		
M	frontend/src/app/token-sale token-sale.component.scss (Line 117)	<b>S4666</b> Unexpected duplicate selector ".mdc-card", first used at line 79
<p>■ <b>Problematic Code:</b></p> <pre> 114:     width: 10px; 115: } 116: &gt;&gt;&gt; 117: .mdc-card { border: 0; } 118: 119: .offer-container { display: flex; 120:     flex-direction: column; </pre>		
M	frontend/src/app/token-sale token-sale.component.scss (Line 119)	<b>S4666</b> Unexpected duplicate selector ".offer-container", first used at line 94
<p>■ <b>Problematic Code:</b></p> <pre> 116: 117: .mdc-card { border: 0; } 118: &gt;&gt;&gt; 119: .offer-container { display: flex; 120:     flex-direction: column; 121:     gap: 16px; } 122: </pre>		
M	frontend/src/app/token-sale token-sale.component.scss (Line 123)	<b>S4666</b> Unexpected duplicate selector ".faq-container", first used at line 46



<p>■ <b>Problematic Code:</b></p> <pre> 120:   flex-direction: column; 121:   gap: 16px; } 122: &gt;&gt;&gt; 123: .faq-container { display: flex; 124:   flex-direction: column; 125:   gap: 4px; 126:   margin-top: -7px; }</pre>		
M	Dockerfile (Line 22)	<b>S6596</b> Use a specific version tag for the image.
<p>■ <b>Problematic Code:</b></p> <pre> 19: RUN npm install -g @cyclonedx/cyclonedx-npm@\$CYCLONEDX_NPM_VERSION 20: RUN npm run sbom 21: &gt;&gt;&gt; 22: FROM gcr.io/distroless/nodejs22-debian12 23: ARG BUILD_DATE 24: ARG VCS_REF 25: LABEL maintainer="Bjoern Kimminich &lt;bjoern.kimminich@owasp.org&gt;" \</pre>		
M	server.ts (Line 19)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 16: import colors from 'colors/safe' 17: import serveIndex from 'serve-index' 18: import bodyParser from 'body-parser' &gt;&gt;&gt; 19: // @ts-expect-error FIXME due to non-existing type definitions for finale-rest 20: import * as finale from 'finale-rest' 21: import compression from 'compression' 22: // @ts-expect-error FIXME due to non-existing type definitions for express-robots-txt</pre>		
M	server.ts (Line 22)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 19: // @ts-expect-error FIXME due to non-existing type definitions for finale-rest 20: import * as finale from 'finale-rest' 21: import compression from 'compression' &gt;&gt;&gt; 22: // @ts-expect-error FIXME due to non-existing type definitions for express-robots-txt 23: import robots from 'express-robots-txt' 24: import cookieParser from 'cookie-parser' 25: import * as Prometheus from 'prom-client'</pre>		
M	server.ts (Line 29)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 26: import swaggerUi from 'swagger-ui-express' 27: import featurePolicy from 'feature-policy' 28: import { IpFilter } from 'express-ipfilter' &gt;&gt;&gt; 29: // @ts-expect-error FIXME due to non-existing type definitions for express-security.txt 30: import securityTxt from 'express-security.txt' 31: import { rateLimit } from 'express-rate-limit' 32: import { getStream } from 'file-stream-rotator' </pre>		
M	routes/userProfile.ts (Line 90)	<b>S6397</b> Replace this character class by the character itself.
<p>■ <b>Problematic Code:</b></p> <pre> 87:     const CSP = `img-src 'self' \${user?.profileImage}; script-src 'self' 'unsafe-eval' https://code.getmdl.io http://ajax.googleapis.com` 88: 89:     challengeUtils.solveIf(challenges.usernameXssChallenge, () =&gt; { &gt;&gt;&gt; 90:         return username &amp;&amp; user?.profileImage.match(/;[ ]*script-src(.)*'unsafe-inline'/g) !== null &amp;&amp; utils.contains(username, '&lt;script&gt;alert(`xss`)&lt;/script&gt;') 91:     }) 92: 93:     res.set({ </pre>		
M	routes/b2bOrder.ts (Line 8)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 5: 6: import vm from 'node:vm' 7: import { type Request, type Response, type NextFunction } from 'express' &gt;&gt;&gt; 8: // @ts-expect-error FIXME due to non-existing type definitions for notevil 9: import { eval as safeEval } from 'notevil' 10: 11: import * as challengeUtils from '../lib/challengeUtils' </pre>		
M	data/datacreator.ts (Line 36)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 33: import { AllHtmlEntities as Entities } from 'html-entities' 34: import * as datacache from './datacache' 35: import * as security from '../lib/insecurity' &gt;&gt;&gt; 36: // @ts-expect-error FIXME due to non-existing type definitions for replace 37: import replace from 'replace' 38: 39: const entities = new Entities() </pre>		
M	test/cypress/e2e/complain.spec.ts (Line 113)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 110:         }) 111:     }) 112: &gt;&gt;&gt; 113:     xit('should be solved either through dev/random or Quadratic Blowup attack', () =&gt; { // FIXME Unreliable during CI/CD as sometimes the Quadratic Blowup is blocked for entity loops 114:         cy.task('isDocker').then((isDocker) =&gt; { 115:             if (!isDocker) { 116:                 cy.expectChallengeSolved({ challenge: 'XXE DoS' }) </pre>		
M	test/api/fileUploadSpec.ts (Line 182)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 179:         .expect('status', 204) 180:     }) 181: &gt;&gt;&gt; 182:     xit('POST valid file with tampered content length', () =&gt; { // FIXME Fails on CI/CD pipeline 183:         const file = path.resolve(__dirname, '../files/validSizeAndTypeForClient.pdf') 184:         const form = frisby.formData() 185:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type </pre>		
M	test/api/profileImageUploadSpec.ts (Line 155)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 152:         .expect('bodyContains', 'Error: Blocked illegal activity') 153:     }) 154: &gt;&gt;&gt; 155:     xit('POST valid image with tampered content length', () =&gt; { // FIXME Fails on CI/CD pipeline 156:         const file = path.resolve(__dirname, '../files/validProfileImage.jpg') 157:         const form = frisby.formData() 158:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type </pre>		
M	test/api/fileUploadSpec.ts (Line 187)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 184:         const form = frisby.formData() 185:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 186: &gt;&gt;&gt; 187:         // @ts-expect-error FIXME form.getHeaders() is not found 188:         return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'], 'Content-Length': 42 }, body: form }) 189:         .expect('status', 500) 190:         .expect('bodyContains', 'Unexpected end of form') </pre>		
M	test/api/profileImageUploadSpec.ts (Line 172)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 169:         return frisby.post(`\${URL}/profile/image/file`, { 170:             headers: { 171:                 Cookie: `token=\${jsonLogin.authentication.token}`, &gt;&gt;&gt; 172:                 // @ts-expect-error FIXME form.getHeaders() is not found 173:                 'Content-Type': form.getHeaders()['content-type'], 174:                 'Content-Length': 42 175:             }, </pre>		
M	test/api/fileUploadSpec.ts (Line 143)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 140:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 141: 142:         return frisby.post(URL + '/file-upload', { &gt;&gt;&gt; 143:             // @ts-expect-error FIXME form.getHeaders() is not found 144:             headers: { 'Content-Type': form.getHeaders()['content-type'] }, 145:             body: form 146:         }).then((res) =&gt; { </pre>		
M	frontend/src/app/search-result search-result.component.scss (Line 25)	<b>S4666</b> Unexpected duplicate selector ".heading", first used at line 13
<p>■ <b>Problematic Code:</b></p> <pre> 22:     width: 60% !important;           /* image ~60%, info-box ~40% */ 23: } 24: &gt;&gt;&gt; 25: .heading { 26:     margin-bottom: 10px; 27: } 28: </pre>		
M	frontend/src/app/search-result search-result.component.scss (Line 151)	<b>S4666</b> Unexpected duplicate selector ".product", first used at line 29
<p>■ <b>Problematic Code:</b></p> <pre> 148:     margin-top: 10px; 149: } 150: &gt;&gt;&gt; 151: .product { 152:     margin-left: -17px; 153:     margin-right: 6px; 154:     margin-top: -17px; </pre>		
M	frontend/src/app/faucet faucet.component.scss (Line 139)	<b>S4666</b> Unexpected duplicate selector ".withdraw-container button", first used at line 85

<b>■ Problematic Code:</b> <pre> 136:   width: 100%; 137: } 138: &gt;&gt;&gt; 139: .withdraw-container button { 140:   height: 68px; 141: } 142: @media (max-width: 1100px) { </pre>		
<b>M</b>	frontend/src/app/token-sale token-sale.component.scss (Line 83)	<b>S4666</b> Unexpected duplicate selector ".faq-container", first used at line 46
<b>■ Problematic Code:</b> <pre> 80:   border: 0; 81: } 82: &gt;&gt;&gt; 83: .faq-container { 84:   display: flex; 85:   flex-direction: column; 86:   gap: 4px; </pre>		
<b>M</b>	frontend/src/app/navbar navbar.component.scss (Line 43)	<b>S4666</b> Unexpected duplicate selector "mat-toolbar", first used at line 6
<b>■ Problematic Code:</b> <pre> 40:   width: 26px; 41: } 42: &gt;&gt;&gt; 43: mat-toolbar { 44:   mat-icon { 45:     font-size: 23px; 46:     height: 24px; </pre>		
<b>M</b>	frontend/src/app/forgot-password forgot-password.component.scss (Line 30)	<b>S4666</b> Unexpected duplicate selector "mat-form-field", first used at line 12
<b>■ Problematic Code:</b> <pre> 27:   width: 60%; 28: } 29: &gt;&gt;&gt; 30: mat-form-field { 31:   input { 32:     color: #fff !important; 33:   } </pre>		
<b>M</b>	test/cypress/e2e/changePassword.s pec.ts (Line 14)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 11:     it('should be able to change password', () =&gt; { 12:         cy.get('#currentPassword').type('focusOnScienceMorty!focusOnScience') 13:         cy.get('#newPassword').type('GonorrheaCantSeeUs!') &gt;&gt;&gt; 14:         cy.get('#newPasswordRepeat').type('GonorrheaCantSeeUs!', { force: true }) // FIXME Analyze Cypress recordings to properly fix behavior during test 15:         cy.get('#changeButton').click() 16: 17:         cy.get('.confirmation').should('not.be.hidden') </pre>		
M	test/cypress/e2e/contact.spec.ts (Line 25)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 22:         cy.get('#userId').clear().type('2') 23:         cy.get('#rating').type('{rightarrow}{rightarrow}{rightarrow}') 24:         cy.get('#comment').type('Picard stinks!') &gt;&gt;&gt; 25:         cy.get('#submitButton').click({ force: true }) // FIXME Analyze Cypress recordings to properly fix behavior during test 26: 27:         cy.visit('/#/administration') 28: </pre>		
M	test/cypress/e2e/contact.spec.ts (Line 61)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 58:         cy.get('#comment').type( 59:             '&lt;&lt;script&gt;Foo&lt;/script&gt;iframe src="javascript:alert(`xss`)"&gt;' 60:         ) &gt;&gt;&gt; 61:         cy.get('#submitButton').click({ force: true }) // FIXME Analyze Cypress recordings to properly fix behavior during test 62: 63:         cy.visit('/#/about') 64:         cy.on('window:alert', (t) =&gt; { </pre>		
M	test/cypress/e2e/contact.spec.ts (Line 84)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 81:         cy.get('#comment').type('sanitize-html 1.4.2 is non-recursive.') 82:         cy.get('#comment').type('express-jwt 0.1.3 has broken crypto.') 83: &gt;&gt;&gt; 84:         cy.get('#submitButton').click({ force: true }) // FIXME Analyze Cypress recordings to properly fix behavior during test 85:         cy.expectChallengeSolved({ challenge: 'Vulnerable Library' }) 86:     }) 87: }) </pre>		
M	test/cypress/e2e/contact.spec.ts (Line 95)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 92:         cy.get('#comment').type( 93:             'The following libraries are bad for crypto: z85, base85, md5 and hashids' 94:         ) &gt;&gt;&gt; 95:         cy.get('#submitButton').click({ force: true }) // FIXME Analyze Cypress recordings to properly fix behavior during test 96:         cy.expectChallengeSolved({ challenge: 'Weird Crypto' }) 97:     }) 98: }) </pre>		
M	test/cypress/e2e/contact.spec.ts (Line 106)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 103:        cy.get('#comment').type( 104:            'You are a typosquatting victim of this NPM package: epilogue-js' 105:        ) &gt;&gt;&gt; 106:        cy.get('#submitButton').click({ force: true }) // FIXME Analyze Cypress recordings to properly fix behavior during test 107:        cy.expectChallengeSolved({ challenge: 'Legacy Typosquatting' }) 108:    }) 109: }) </pre>		
M	test/cypress/e2e/contact.spec.ts (Line 117)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 114:        cy.get('#comment').type( 115:            'You are a typosquatting victim of this NPM package: ngy-cookie' 116:        ) &gt;&gt;&gt; 117:        cy.get('#submitButton').click({ force: true }) // FIXME Analyze Cypress recordings to properly fix behavior during test 118:        cy.expectChallengeSolved({ challenge: 'Frontend Typosquatting' }) 119:    }) 120: }) </pre>		
M	test/cypress/e2e/contact.spec.ts (Line 128)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 125:        cy.get('#comment').type( 126:            'Pickle Rick is hiding behind one of the support team ladies' 127:        ) &gt;&gt;&gt; 128:        cy.get('#submitButton').click({ force: true }) // FIXME Analyze Cypress recordings to properly fix behavior during test 129:        cy.expectChallengeSolved({ challenge: 'Steganography' }) 130:    }) 131: }) </pre>		
M	test/cypress/e2e/contact.spec.ts (Line 232)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.







<p>■ <b>Problematic Code:</b></p> <pre> 12: import logger from './logger' 13: import { type NextFunction, type Request, type Response } from 'express' 14: import * as utils from './utils' &gt;&gt;&gt; 15: // @ts-expect-error FIXME due to non-existing type definitions for median 16: import median from 'median' 17: import { type ChallengeKey } from 'models/challenge' 18: </pre>		
M	lib/startup/customizeApplication.ts (Line 9)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 6: import fs from 'node:fs' 7: import config from 'config' 8: import * as utils from './utils' &gt;&gt;&gt; 9: // @ts-expect-error FIXME due to non-existing type definitions for replace 10: import replace from 'replace' 11: 12: const customizeApplication = async () =&gt; { </pre>		
M	lib/startup/customizeEasterEgg.ts (Line 8)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 5: 6: import config from 'config' 7: import * as utils from './utils' &gt;&gt;&gt; 8: // @ts-expect-error FIXME due to non-existing type definitions for replace 9: import replace from 'replace' 10: 11: const customizeEasterEgg = async () =&gt; { </pre>		
M	lib/startup/validateConfig.ts (Line 10)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 7: import config from 'config' 8: import process from 'node:process' 9: import colors from 'colors/safe' &gt;&gt;&gt; 10: // @ts-expect-error FIXME due to non-existing type definitions for yaml-schema-validator 11: import validateSchema from 'yaml-schema-validator/src' 12: 13: import type { AppConfig, Memory as MemoryConfig, Product as ProductConfig } from '../config.types' </pre>		
M	lib/startup/validateDependencies.ts (Line 9)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

■	<b>Problematic Code:</b>	<pre> 6: import colors from 'colors/safe' 7: import * as utils from '../utils' 8: import logger from '../logger' &gt;&gt;&gt; 9: // @ts-expect-error FIXME due to non-existing type definitions for check-dependencies 10: import dependencyChecker from 'check-dependencies' 11: 12: const validateDependencies = async ({ packageDir = '.', exitOnFailure = true } = {}) =&gt; { </pre>
M	lib/startup/validateDependenciesBas ic.ts (Line 10)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
■	<b>Problematic Code:</b>	<pre> 7: // otherwise this check would be useless as the app would fail on a random import before even reaching this point 8: const validateIfDependencyCheckerIsInstalled = async () =&gt; { 9:   try { &gt;&gt;&gt; 10:     // @ts-expect-error FIXME due to non-existing type definitions for check-dependencies 11:     await import('check-dependencies') 12:   } catch (err) { 13:     console.error('Please run "npm install" before starting the application!') </pre>
M	lib/startup/validatePreconditions.ts (Line 15)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
■	<b>Problematic Code:</b>	<pre> 12: import process from 'node:process' 13: import semver from 'semver' 14: import portscanner from 'portscanner' &gt;&gt;&gt; 15: // @ts-expect-error FIXME due to non-existing type definitions for check-internet-connected 16: import checkInternetConnected from 'check-internet-connected' 17: 18: const domainDependencies = { </pre>
M	lib/antiCheat.ts (Line 77)	<b>S3358</b> Extract this nested ternary operation into an independent statement.

<p>■ <b>Problematic Code:</b></p> <pre> 74:     cheatScore = Math.min(1, cheatScore) 75:   } 76: &gt;&gt;&gt; 77:   logger.info(`Cheat score for \${areCoupled(challenge, previous().challenge) ? 'coupled' : (isTrivial(challenge) ? 'trivial' : '')}\${challenge.tutorialOrder ? 'tutorial' : ''}\${colors.cyan(challenge.key)} solved in \${Math.round(minutesSincePreviousSolve)}min (expected ~\${minutesExpectedToSolve}min) with\${config.get('challenges.showHints') ? '' : 'out'} hints allowed\${percentPrecedingInteraction &gt; -1 ? (' and ' + percentPrecedingInteraction * 100 + '% expected preceding URL interaction') : ''}: \${cheatScore &lt; 0.33 ? colors.green(cheatScore.toString()) : (cheatScore &lt; 0.66 ? colors.yellow(cheatScore.toString()) : colors.red(cheatScore.toString()))}`) 78:   solves.push({ challenge, phase: 'hack it', timestamp, cheatScore }) 79:   return cheatScore 80: }</pre>	
<p><b>M</b> lib/antiCheat.ts (Line 77)</p>	<p><b>S3358</b> Extract this nested ternary operation into an independent statement.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 74:     cheatScore = Math.min(1, cheatScore) 75:   } 76: &gt;&gt;&gt; 77:   logger.info(`Cheat score for \${areCoupled(challenge, previous().challenge) ? 'coupled' : (isTrivial(challenge) ? 'trivial' : '')}\${challenge.tutorialOrder ? 'tutorial' : ''}\${colors.cyan(challenge.key)} solved in \${Math.round(minutesSincePreviousSolve)}min (expected ~\${minutesExpectedToSolve}min) with\${config.get('challenges.showHints') ? '' : 'out'} hints allowed\${percentPrecedingInteraction &gt; -1 ? (' and ' + percentPrecedingInteraction * 100 + '% expected preceding URL interaction') : ''}: \${cheatScore &lt; 0.33 ? colors.green(cheatScore.toString()) : (cheatScore &lt; 0.66 ? colors.yellow(cheatScore.toString()) : colors.red(cheatScore.toString()))}`) 78:   solves.push({ challenge, phase: 'hack it', timestamp, cheatScore }) 79:   return cheatScore 80: }</pre>	
<p><b>M</b> lib/startup/validatePreconditions.ts (Line 90)</p>	<p><b>S1134</b> Take the required action to fix the issue indicated by this comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 87:   }) 88:   .catch(() =&gt; { 89:     logger.warn(`Domain \${colors.bold(domain)} is not reachable (\${colors.yellow('NOT OK')}) in a future major release`) &gt;&gt;&gt; 90:     // @ts-expect-error FIXME Type problem by accessing key via variable 91:     domainDependencies[domain].forEach((dependency: string) =&gt; { 92:       logger.warn(`\${colors.italic(dependency)} will not work as intended without access to \${colors.bold(domain)}`) 93:     }) </pre>	
<p><b>M</b> lib/startup/registerWebsocketEvents.ts (Line 21)</p>	<p><b>S1134</b> Take the required action to fix the issue indicated by this comment.</p>

<p>■ <b>Problematic Code:</b></p> <pre> 18: 19: const registerWebsocketEvents = (server: any) =&gt; { 20:   const io = new Server(server, { cors: { origin: 'http://localhost:4200' } }) &gt;&gt;&gt; 21:   // @ts-expect-error FIXME Type safety issue when setting global socket-io object 22:   globalWithSocketIO.io = io 23: 24:   io.on('connection', (socket: any) =&gt; { </pre>		
M	routes/login.ts (Line 48)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 45:         } 46:       }) 47:     } else if (user.data?.id) { &gt;&gt;&gt; 48:       // @ts-expect-error FIXME some properties missing in user - vuln-code-snippet hide-line 49:       afterLogin(user, res, next) 50:     } else { 51:       res.status(401).send(res.__('Invalid email or password.')) </pre>		
M	test/server/b2bOrderSpec.ts (Line 39)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 36:     expect(challenges.rceChallenge.solved).to.equal(true) 37:   }) 38: &gt;&gt;&gt; 39:   // FIXME Disabled as test started failing on Linux regularly 40:   xit('timeout after 2 seconds solves "rceOccupyChallenge"', () =&gt; { 41:     req.body.orderLinesData = '/((a+)+)b/.test("aaaaaaaaaaaaaaaaaaaaaaaaaaaaa")' 42: </pre>		
M	routes/2fa.ts (Line 49)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 46:     const [basket] = await BasketModel.findOrCreate({ where: { UserId: userId } }) 47: 48:     const token = security.authorize(plainUser) &gt;&gt;&gt; 49:     // @ts-expect-error FIXME set new property for original basket 50:     plainUser.bid = basket.id // keep track of original basket for challenge solution check 51:     security.authenticatedUsers.put(token, plainUser) 52: </pre>		
M	routes/chatbot.ts (Line 98)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<b>■ Problematic Code:</b> <pre> 95:   try { 96:     const response = await bot.respond(req.body.query, `\${user.id}`) 97:     if (response.action === 'function') { &gt;&gt;&gt; 98:       // @ts-expect-error FIXME unclear usage of any type as index 99:       if (response.handler &amp;&amp; botUtils[response.handler]) { 100:        // @ts-expect-error FIXME unclear usage of any type as index 101:        res.status(200).json(await botUtils[response.handler](req.body.query, user)) </pre>		
<b>M</b>	routes/chatbot.ts (Line 100)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>■ Problematic Code:</b> <pre> 97:     if (response.action === 'function') { 98:       // @ts-expect-error FIXME unclear usage of any type as index 99:       if (response.handler &amp;&amp; botUtils[response.handler]) { &gt;&gt;&gt; 100:        // @ts-expect-error FIXME unclear usage of any type as index 101:        res.status(200).json(await botUtils[response.handler](req.body.query, user)) 102:      } else { 103:        res.status(200).json({ </pre>		
<b>M</b>	data/mongodb.ts (Line 6)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>■ Problematic Code:</b> <pre> 3:  * SPDX-License-Identifier: MIT 4:  */ 5: &gt;&gt;&gt; 6: // @ts-expect-error FIXME due to non-existing type definitions for MarsDB 7: import * as MarsDB from 'marsdb' 8: 9: export const reviewsCollection = new MarsDB.Collection('posts') </pre>		
<b>M</b>	lib/antiCheat.ts (Line 127)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>■ Problematic Code:</b> <pre> 124: } 125: 126: function areCoupled (challenge: Challenge, previousChallenge: Challenge) { &gt;&gt;&gt; 127:   // @ts-expect-error FIXME any type issues 128:   return coupledChallenges[challenge.key]?.indexOf(previousChallenge.key) &gt; -1    coupledChallenges[previousChallenge.key]?.indexOf(challenge.key) &gt; -1 129: } 130: </pre>		
<b>M</b>	lib/insecurity.ts (Line 19)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<div> <div> <div></div> <div>Problematic Code:</div> </div> <pre> 16: 17: /* tslint node: true */ 18: // eslint-disable-next-line @typescript-eslint/prefer-ts-expect-error &gt;&gt;&gt; 19: // @ts-expect-error FIXME no typescript definitions for z85 :( 20: import * as z85 from 'z85' 21: 22: export const publicKey = fs ? fs.readFileSync('encryptionkeys/jwt.pub', 'utf8') : 'placeholder-public-key' </pre> </div>		
<div> <div>M</div> </div>	lib/startup/validateConfig.ts (Line 81)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>
<div> <div> <div></div> <div>Problematic Code:</div> </div> <pre> 78: export const checkUnambiguousMandatorySpecialProducts = (products: ProductConfig[]) =&gt; { 79:   let success = true 80:   specialProducts.forEach(({ name, key }) =&gt; { &gt;&gt;&gt; 81:     // @ts-expect-error FIXME Ignoring any type issue on purpose 82:     const matchingProducts = products.filter((product) =&gt; product[key]) 83:     if (matchingProducts.length === 0) { 84:       logger.warn(`No product is configured as \${colors.italic(name)} but one is required (\${colors.red('NOT OK')})`) </pre> </div>		
<div> <div>M</div> </div>	lib/startup/validateConfig.ts (Line 97)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>
<div> <div> <div></div> <div>Problematic Code:</div> </div> <pre> 94: export const checkNecessaryExtraKeysOnSpecialProducts = (products: ProductConfig[]) =&gt; { 95:   let success = true 96:   specialProducts.forEach(({ name, key, extra = {} }) =&gt; { &gt;&gt;&gt; 97:     // @ts-expect-error FIXME implicit any type issue 98:     const matchingProducts = products.filter((product) =&gt; product[key]) 99:     // @ts-expect-error FIXME implicit any type issue 100:    if (extra.key &amp;&amp; matchingProducts.length === 1 &amp;&amp; !matchingProducts[0][extra.key]) { </pre> </div>		
<div> <div>M</div> </div>	lib/startup/validateConfig.ts (Line 99)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>
<div> <div> <div></div> <div>Problematic Code:</div> </div> <pre> 96:   specialProducts.forEach(({ name, key, extra = {} }) =&gt; { 97:     // @ts-expect-error FIXME implicit any type issue 98:     const matchingProducts = products.filter((product) =&gt; product[key]) &gt;&gt;&gt; 99:     // @ts-expect-error FIXME implicit any type issue 100:    if (extra.key &amp;&amp; matchingProducts.length === 1 &amp;&amp; !matchingProducts[0][extra.key]) { 101:      logger.warn(`Product \${colors.italic(matchingProducts[0].name)} configured as \${colors.italic(name)} doesn't contain necessary \${colors.italic(`\${extra.name}`)} (\${colors.red('NOT OK')})`) 102:      success = false </pre> </div>		
<div> <div>M</div> </div>	lib/startup/validateConfig.ts (Line 111)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>

<div> <div> <div></div> <div> <div>■</div> <div>Problematic Code:</div> </div> </div> <pre> 108: export const checkUniqueSpecialOnProducts = (products: ProductConfig[]) =&gt; { 109:   let success = true 110:   products.forEach((product) =&gt; { &gt;&gt;&gt; 111:     // @ts-expect-error FIXME any type issue 112:     const appliedSpecials = specialProducts.filter(({ key }) =&gt; product[key]) 113:     if (appliedSpecials.length &gt; 1) { 114:       logger.warn(`Product \${colors.italic(product.name)} is used as \${appliedSpecials.map(({ name }) =&gt; `\${colors.italic(name)}`).join(' and ')} but can only be used for one challenge (\${colors.red('NOT OK')})`) </pre> </div>		
<div> <div>M</div> </div>	lib/utils.ts (Line 70)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>
<div> <div> <div></div> <div> <div>■</div> <div>Problematic Code:</div> </div> </div> <pre> 67: 68: export const version = (module?: string) =&gt; { 69:   if (module) { &gt;&gt;&gt; 70:     // @ts-expect-error FIXME Ignoring any type issue on purpose 71:     return packageJson.dependencies[module] 72:   } else { 73:     return packageJson.version </pre> </div>		
<div> <div>M</div> </div>	models/relations.ts (Line 44)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>
<div> <div> <div></div> <div> <div>■</div> <div>Problematic Code:</div> </div> </div> <pre> 41:     name: 'BasketId' 42:   } 43: }) &gt;&gt;&gt; 44: // @ts-expect-error FIXME type mismatch 45: makeKeyNonUpdatable(BasketItemModel, 'BasketId') 46: 47: CardModel.belongsTo(UserModel, { </pre> </div>		
<div> <div>M</div> </div>	models/relations.ts (Line 97)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>
<div> <div> <div></div> <div> <div>■</div> <div>Problematic Code:</div> </div> </div> <pre> 94:     name: 'ProductId' 95:   } 96: }) &gt;&gt;&gt; 97: // @ts-expect-error FIXME type mismatch 98: makeKeyNonUpdatable(BasketItemModel, 'ProductId') 99: 100: QuantityModel.belongsTo(ProductModel, { </pre> </div>		
<div> <div>M</div> </div>	routes/showProductReviews.ts (Line 16)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>



<b>■ Problematic Code:</b> <pre> 13: import * as utils from '../lib/utils' 14: 15: // Blocking sleep function as in native MongoDB &gt;&gt;&gt; 16: // @ts-expect-error FIXME Type safety broken for global object 17: global.sleep = (time: number) =&gt; { 18:   // Ensure that users don't accidentally dos their servers for too long 19:   if (time &gt; 2000) { </pre>		
M	server.ts (Line 243)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>■ Problematic Code:</b> <pre> 240:   const serveIndexMiddleware = (req: Request, res: Response, next: NextFunction) =&gt; { 241:     // eslint-disable-next-line @typescript-eslint/unbound-method 242:     const origEnd = res.end &gt;&gt;&gt; 243:     // @ts-expect-error FIXME assignment broken due to seemingly void return value 244:     res.end = function () { 245:       if (arguments.length) { 246:         const reqPath = req.originalUrl.replace(/\?.*\$/, '') </pre>		
M	server.ts (Line 261)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>■ Problematic Code:</b> <pre> 258:         return 'a href="' + relativePath + '"' 259:       }) 260:     } &gt;&gt;&gt; 261:     // @ts-expect-error FIXME passed argument has wrong type 262:     origEnd.apply(this, arguments) 263:   } 264:   next() </pre>		
M	server.ts (Line 311)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>■ Problematic Code:</b> <pre> 308: 309:   app.use(bodyParser.text({ type: '*/*' })) 310:   app.use(function jsonParser (req: Request, res: Response, next: NextFunction) { &gt;&gt;&gt; 311:     // @ts-expect-error FIXME intentionally saving original request in this property 312:     req.rawBody = req.body 313:     if (req.headers['content-type']?.includes('application/json')) { 314:       if (!req.body) { </pre>		
M	test/api/2faSpec.ts (Line 21)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 18: const jsonHeader = { 'content-type': 'application/json' } 19: 20: async function login ({ email, password, totpSecret }: { email: string, password: string, totpSecret?: string }) { &gt;&gt;&gt; 21:   // @ts-expect-error FIXME promise return handling broken 22:   const loginRes = await frisby 23:     .post(REST_URL + '/user/login', { 24:       email,</pre>		
M	test/api/2faSpec.ts (Line 38)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 35:       throw new Error('login with totp required but no totp secret provided to login function') 36:     } 37: &gt;&gt;&gt; 38:   // @ts-expect-error FIXME promise return handling broken 39:   const totpRes = await frisby 40:     .post(REST_URL + '/2fa/verify', { 41:       tmpToken: loginRes.json.data.tmpToken,</pre>		
M	test/api/2faSpec.ts (Line 52)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 49: } 50: 51: async function register ({ email, password, totpSecret }: { email: string, password: string, totpSecret?: string }) { &gt;&gt;&gt; 52:   // @ts-expect-error FIXME promise return handling broken 53:   const res = await frisby 54:     .post(API_URL + '/Users/', { 55:       email,</pre>		
M	test/api/2faSpec.ts (Line 67)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 64:   if (totpSecret) { 65:     const { token } = await login({ email, password }) 66: &gt;&gt;&gt; 67:   // @ts-expect-error FIXME promise return handling broken 68:   await frisby.post( 69:     REST_URL + '/2fa/setup', 70:     {</pre>		
M	test/api/2faSpec.ts (Line 111)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<div> <div> <div></div> <div>Problematic Code:</div> </div> <pre> 108: 109:     const totpToken = otplib.authenticator.generate('IFTXE3SPOEYVURT2MRYGI52TKJ4HC3KH') 110: &gt;&gt;&gt; 111:     // @ts-expect-error FIXME promise return handling broken 112:     await frisby.post(REST_URL + '/2fa/verify', { 113:         headers: jsonHeader, 114:         body: { </pre> </div>		
<div> <div>M</div> </div>	test/api/2faSpec.ts (Line 139)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>
<div> <div> <div></div> <div>Problematic Code:</div> </div> <pre> 136: 137:     const totpToken = otplib.authenticator.generate('THIS9ISNT8THE8RIGHT8SECRET') 138: &gt;&gt;&gt; 139:     // @ts-expect-error FIXME promise return handling broken 140:     await frisby.post(REST_URL + '/2fa/verify', { 141:         headers: jsonHeader, 142:         body: { </pre> </div>		
<div> <div>M</div> </div>	test/api/2faSpec.ts (Line 158)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>
<div> <div> <div></div> <div>Problematic Code:</div> </div> <pre> 155: 156:     const totpToken = otplib.authenticator.generate('IFTXE3SPOEYVURT2MRYGI52TKJ4HC3KH') 157: &gt;&gt;&gt; 158:     // @ts-expect-error FIXME promise return handling broken 159:     await frisby.post(REST_URL + '/2fa/verify', { 160:         headers: jsonHeader, 161:         body: { </pre> </div>		
<div> <div>M</div> </div>	test/api/2faSpec.ts (Line 178)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>
<div> <div> <div></div> <div>Problematic Code:</div> </div> <pre> 175:         totpSecret: 'IFTXE3SPOEYVURT2MRYGI52TKJ4HC3KH' 176:     }) 177: &gt;&gt;&gt; 178:     // @ts-expect-error FIXME promise return handling broken 179:     await frisby.get( 180:         REST_URL + '/2fa/status', 181:         { </pre> </div>		
<div> <div>M</div> </div>	test/api/2faSpec.ts (Line 203)	<div> <div>S1134</div> <div>Take the required action to fix the issue indicated by this comment.</div> </div>

<div> <div>■ Problematic Code:</div> <pre> 200:         password: '0Y8rMnww\$*9VFYE\$59-!Fg1L6t&amp;6lB' 201:     }) 202: &gt;&gt;&gt; 203:         // @ts-expect-error FIXME promise return handling broken 204:         await frisby.get( 205:             REST_URL + '/2fa/status', 206:             { </pre> </div>		
<div>M</div>	test/api/2faSpec.ts (Line 227)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 224:     }) 225: 226:     it('GET should return 401 when not logged in', async () =&gt; { &gt;&gt;&gt; 227:         // @ts-expect-error FIXME promise return handling broken 228:         await frisby.get(REST_URL + '/2fa/status') 229:             .expect('status', 401) 230:     }) </pre> </div>		
<div>M</div>	test/api/2faSpec.ts (Line 243)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 240:         await register({ email, password }) 241:         const { token } = await login({ email, password }) 242: &gt;&gt;&gt; 243:         // @ts-expect-error FIXME promise return handling broken 244:         await frisby.post( 245:             REST_URL + '/2fa/setup', 246:             { </pre> </div>		
<div>M</div>	test/api/2faSpec.ts (Line 262)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 259:     }) 260:     .expect('status', 200) 261: &gt;&gt;&gt; 262:         // @ts-expect-error FIXME promise return handling broken 263:         await frisby.get( 264:             REST_URL + '/2fa/status', 265:             { </pre> </div>		
<div>M</div>	test/api/2faSpec.ts (Line 289)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 286:     await register({ email, password }) 287:     const { token } = await login({ email, password }) 288: &gt;&gt;&gt; 289:     // @ts-expect-error FIXME promise return handling broken 290:     await frisby.post( 291:         REST_URL + '/2fa/setup', 292:         { </pre>		
M	test/api/2faSpec.ts (Line 318)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 315:     await register({ email, password }) 316:     const { token } = await login({ email, password }) 317: &gt;&gt;&gt; 318:     // @ts-expect-error FIXME promise return handling broken 319:     await frisby.post( 320:         REST_URL + '/2fa/setup', 321:         { </pre>		
M	test/api/2faSpec.ts (Line 347)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 344:     await register({ email, password }) 345:     const { token } = await login({ email, password }) 346: &gt;&gt;&gt; 347:     // @ts-expect-error FIXME promise return handling broken 348:     await frisby.post( 349:         REST_URL + '/2fa/setup', 350:         { </pre>		
M	test/api/2faSpec.ts (Line 374)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 371: 372:     const { token } = await login({ email, password, totpSecret }) 373: &gt;&gt;&gt; 374:     // @ts-expect-error FIXME promise return handling broken 375:     await frisby.post( 376:         REST_URL + '/2fa/setup', 377:         { </pre>		
M	test/api/2faSpec.ts (Line 404)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<div> <div>■ Problematic Code:</div> <pre> 401:     await register({ email, password, totpSecret }) 402:     const { token } = await login({ email, password, totpSecret }) 403: &gt;&gt;&gt; 404:     // @ts-expect-error FIXME promise return handling broken 405:     await getStatus(token) 406:         .expect('status', 200) 407:         .expect('json', { </pre> </div>		
<div>M</div>	test/api/2faSpec.ts (Line 411)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 408:         setup: true 409:     }) 410: &gt;&gt;&gt; 411:     // @ts-expect-error FIXME promise return handling broken 412:     await frisby.post( 413:         REST_URL + '/2fa/disable', 414:         { </pre> </div>		
<div>M</div>	test/api/2faSpec.ts (Line 425)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 422:     } 423:     ).expect('status', 200) 424: &gt;&gt;&gt; 425:     // @ts-expect-error FIXME promise return handling broken 426:     await getStatus(token) 427:         .expect('status', 200) 428:         .expect('json', { </pre> </div>		
<div>M</div>	test/api/2faSpec.ts (Line 441)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 438:     await register({ email, password, totpSecret }) 439:     const { token } = await login({ email, password, totpSecret }) 440: &gt;&gt;&gt; 441:     // @ts-expect-error FIXME promise return handling broken 442:     await getStatus(token) 443:         .expect('status', 200) 444:         .expect('json', { </pre> </div>		
<div>M</div>	test/api/2faSpec.ts (Line 448)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 445:         setup: true 446:     }) 447: &gt;&gt;&gt; 448:     // @ts-expect-error FIXME promise return handling broken 449:     await frisby.post( 450:         REST_URL + '/2fa/disable', 451:         { </pre>		
M	test/api/2faSpec.ts (Line 462)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 459:     } 460:     ).expect('status', 401) 461: &gt;&gt;&gt; 462:     // @ts-expect-error FIXME promise return handling broken 463:     await getStatus(token) 464:     .expect('status', 200) 465:     .expect('json', { </pre>		
M	test/api/chatBotSpec.ts (Line 19)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 16: let trainingData: { data: any[] } 17: 18: async function login ({ email, password }: { email: string, password: string }) { &gt;&gt;&gt; 19:     // @ts-expect-error FIXME promise return handling broken 20:     const loginRes = await frisby 21:         .post(REST_URL + '/user/login', { 22:             email, </pre>		
M	test/api/dataExportApiSpec.ts (Line 202)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 199:         return frisby.post(REST_URL + '/memories', { 200:             headers: { 201:                 Authorization: 'Bearer ' + jsonLogin.authentication.token, &gt;&gt;&gt; 202:                 // @ts-expect-error FIXME form.getHeaders() is not found 203:                 'Content-Type': form.getHeaders()['content-type'] 204:             }, 205:             body: form </pre>		
M	test/api/dataExportApiSpec.ts (Line 340)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 337:         return frisby.post(REST_URL + '/memories', { 338:             headers: { 339:                 Authorization: 'Bearer ' + jsonLogin.authentication.token, &gt;&gt;&gt; 340:                 // @ts-expect-error FIXME form.getHeaders() is not found 341:                 'Content-Type': form.getHeaders()['content-type'] 342:             }, 343:             body: form </pre>		
M	test/api/deluxeApiSpec.ts (Line 14)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 11: const API_URL = 'http://localhost:3000/api' 12: 13: async function login ({ email, password }: { email: string, password: string }) { &gt;&gt;&gt; 14:     // @ts-expect-error FIXME promise return handling broken 15:     const loginRes = await frisby 16:         .post(`\${REST_URL}/user/login`, { 17:             email, </pre>		
M	test/api/fileUploadSpec.ts (Line 21)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 18:     const form = frisby.formData() 19:     form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 20: &gt;&gt;&gt; 21:     // @ts-expect-error FIXME form.getHeaders() is not found 22:     return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 23:         .expect('status', 204) 24:     }) </pre>		
M	test/api/fileUploadSpec.ts (Line 31)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 28:     const form = frisby.formData() 29:     form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 30: &gt;&gt;&gt; 31:     // @ts-expect-error FIXME form.getHeaders() is not found 32:     return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 33:         .expect('status', 204) 34:     }) </pre>		
M	test/api/fileUploadSpec.ts (Line 41)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.



<p>■ <b>Problematic Code:</b></p> <pre> 38:     const form = frisby.formData() 39:     form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 40: &gt;&gt;&gt; 41:     // @ts-expect-error FIXME form.getHeaders() is not found 42:     return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 43:         .expect('status', 204) 44:     }) </pre>		
M	test/api/fileUploadSpec.ts (Line 51)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 48:     const form = frisby.formData() 49:     form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 50: &gt;&gt;&gt; 51:     // @ts-expect-error FIXME form.getHeaders() is not found 52:     return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 53:         .expect('status', 410) 54:     }) </pre>		
M	test/api/fileUploadSpec.ts (Line 61)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 58:     const form = frisby.formData() 59:     form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 60: &gt;&gt;&gt; 61:     // @ts-expect-error FIXME form.getHeaders() is not found 62:     return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 63:         .expect('status', 410) 64:     }) </pre>		
M	test/api/fileUploadSpec.ts (Line 73)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 70:     form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 71: 72:     return frisby.post(URL + '/file-upload', { &gt;&gt;&gt; 73:         // @ts-expect-error FIXME form.getHeaders() is not found 74:         headers: { 'Content-Type': form.getHeaders()['content-type'] }, 75:         body: form 76:     }) </pre>		
M	test/api/fileUploadSpec.ts (Line 86)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 83:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 84: 85:         return frisby.post(URL + '/file-upload', { &gt;&gt;&gt; 86:             // @ts-expect-error FIXME form.getHeaders() is not found 87:             headers: { 'Content-Type': form.getHeaders()['content-type'] }, 88:             body: form 89:         }) </pre>		
M	test/api/fileUploadSpec.ts (Line 99)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 96:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 97: 98:         return frisby.post(URL + '/file-upload', { &gt;&gt;&gt; 99:             // @ts-expect-error FIXME form.getHeaders() is not found 100:             headers: { 'Content-Type': form.getHeaders()['content-type'] }, 101:             body: form 102:         }) </pre>		
M	test/api/fileUploadSpec.ts (Line 113)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 110:        form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 111: 112:        return frisby.post(URL + '/file-upload', { &gt;&gt;&gt; 113:            // @ts-expect-error FIXME form.getHeaders() is not found 114:            headers: { 'Content-Type': form.getHeaders()['content-type'] }, 115:            body: form 116:        }).then((res) =&gt; { </pre>		
M	test/api/fileUploadSpec.ts (Line 127)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 124:        form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 125: 126:        return frisby.post(URL + '/file-upload', { &gt;&gt;&gt; 127:            // @ts-expect-error FIXME form.getHeaders() is not found 128:            headers: { 'Content-Type': form.getHeaders()['content-type'] }, 129:            body: form 130:        }).then((res) =&gt; { </pre>		
M	test/api/fileUploadSpec.ts (Line 157)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 154:     const form = frisby.formData() 155:     form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 156: &gt;&gt;&gt; 157:     // @ts-expect-error FIXME form.getHeaders() is not found 158:     return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 159:         .expect('status', 500) 160:     }) </pre>		
M	test/api/fileUploadSpec.ts (Line 167)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 164:     const form = frisby.formData() 165:     form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 166: &gt;&gt;&gt; 167:     // @ts-expect-error FIXME form.getHeaders() is not found 168:     return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 169:         .expect('status', 204) 170:     }) </pre>		
M	test/api/fileUploadSpec.ts (Line 177)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 174:     const form = frisby.formData() 175:     form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 176: &gt;&gt;&gt; 177:     // @ts-expect-error FIXME form.getHeaders() is not found 178:     return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 179:         .expect('status', 204) 180:     }) </pre>		
M	test/api/memoryApiSpec.ts (Line 46)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 43: 44:     return frisby.post(REST_URL + '/memories', { 45:         headers: { &gt;&gt;&gt; 46:             // @ts-expect-error FIXME form.getHeaders() is not found 47:             'Content-Type': form.getHeaders()['content-type'] 48:         }, 49:         body: form </pre>		
M	test/api/memoryApiSpec.ts (Line 72)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 69:         return frisby.post(REST_URL + '/memories', { 70:             headers: { 71:                 Authorization: 'Bearer ' + jsonLogin.authentication.token, &gt;&gt;&gt; 72:                 // @ts-expect-error FIXME form.getHeaders() is not found 73:                 'Content-Type': form.getHeaders()['content-type'] 74:             }, 75:             body: form </pre>		
M	test/api/memoryApiSpec.ts (Line 150)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 147:         return frisby.post(REST_URL + '/memories', { 148:             headers: { 149:                 Authorization: 'Bearer ' + jsonLogin.authentication.token, &gt;&gt;&gt; 150:                 // @ts-expect-error FIXME form.getHeaders() is not found 151:                 'Content-Type': form.getHeaders()['content-type'] 152:             }, 153:             body: form </pre>		
M	test/api/metricsApiSpec.ts (Line 38)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 35:         const form = frisby.formData() 36:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 37: &gt;&gt;&gt; 38:         // @ts-expect-error FIXME form.getHeaders() is not found 39:         return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 40:         .expect('status', 204) 41:         .then(() =&gt; { </pre>		
M	test/api/metricsApiSpec.ts (Line 54)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 51:         const form = frisby.formData() 52:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type 53: &gt;&gt;&gt; 54:         // @ts-expect-error FIXME form.getHeaders() is not found 55:         return frisby.post(URL + '/file-upload', { headers: { 'Content-Type': form.getHeaders()['content-type'] }, body: form }) 56:         .expect('status', 500) 57:         .then(() =&gt; { </pre>		
M	test/api/profileImageUploadSpec.ts (Line 33)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<p>■ <b>Problematic Code:</b></p> <pre> 30:         return frisby.post(`\${URL}/profile/image/file`, { 31:             headers: { 32:                 Cookie: `token=\${jsonLogin.authentication.token}`, &gt;&gt;&gt; 33:                 // @ts-expect-error FIXME form.getHeaders() is not found 34:                 'Content-Type': form.getHeaders()['content-type'] 35:             }, 36:             body: form, </pre>		
M	test/api/profileImageUploadSpec.ts (Line 60)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 57:         return frisby.post(`\${URL}/profile/image/file`, { 58:             headers: { 59:                 Cookie: `token=\${jsonLogin.authentication.token}`, &gt;&gt;&gt; 60:                 // @ts-expect-error FIXME form.getHeaders() is not found 61:                 'Content-Type': form.getHeaders()['content-type'] 62:             }, 63:             body: form </pre>		
M	test/api/profileImageUploadSpec.ts (Line 78)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 75:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the FileStream type 76: 77:         return frisby.post(`\${URL}/profile/image/file`, { &gt;&gt;&gt; 78:             // @ts-expect-error FIXME form.getHeaders() is not found 79:             headers: { 'Content-Type': form.getHeaders()['content-type'] }, 80:             body: form 81:         }) </pre>		
M	test/api/profileImageUploadSpec.ts (Line 105)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 102:        return frisby.post(`\${URL}/profile/image/url`, { 103:            headers: { 104:                Cookie: `token=\${jsonLogin.authentication.token}`, &gt;&gt;&gt; 105:                // @ts-expect-error FIXME form.getHeaders() is not found 106:                'Content-Type': form.getHeaders()['content-type'] 107:            }, 108:            body: form, </pre>		
M	test/api/profileImageUploadSpec.ts (Line 131)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

■	<b>Problematic Code:</b>	<pre> 128:         return frisby.post(`\${URL}/profile/image/url`, { 129:             headers: { 130:                 Cookie: `token=\${jsonLogin.authentication.token}`, &gt;&gt;&gt; 131:                 // @ts-expect-error FIXME form.getHeaders() is not found 132:                 'Content-Type': form.getHeaders()['content-type'] 133:             }, 134:             body: form, </pre>
M	test/api/profileImageUploadSpec.ts (Line 146)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
■	<b>Problematic Code:</b>	<pre> 143:         form.append('imageUrl', 'cataas.com/cat') 144: 145:         return frisby.post(`\${URL}/profile/image/url`, { &gt;&gt;&gt; 146:             // @ts-expect-error FIXME form.getHeaders() is not found 147:             headers: { 'Content-Type': form.getHeaders()['content-type'] }, 148:             body: form 149:         }) </pre>
M	test/api/userProfileSpec.ts (Line 51)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
■	<b>Problematic Code:</b>	<pre> 48:         form.append('username', 'Localhorst') 49: 50:         return frisby.post(`\${URL}/profile`, { &gt;&gt;&gt; 51:             // @ts-expect-error FIXME form.getHeaders() is not found 52:             headers: { 'Content-Type': form.getHeaders()['content-type'], Cookie: authHeader.Cookie }, 53:             body: form, 54:             redirect: 'manual' </pre>
M	test/api/userProfileSpec.ts (Line 64)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
■	<b>Problematic Code:</b>	<pre> 61:         form.append('username', 'Localhorst') 62: 63:         return frisby.post(`\${URL}/profile`, { &gt;&gt;&gt; 64:             // @ts-expect-error FIXME form.getHeaders() is not found 65:             headers: { 'Content-Type': form.getHeaders()['content-type'] }, 66:             body: form 67:         }) </pre>
M	test/server/insecuritySpec.ts (Line 6)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.

<b>■ Problematic Code:</b> <pre> 3:  * SPDX-License-Identifier: MIT 4:  */ 5: &gt;&gt;&gt; 6: // @ts-expect-error FIXME no typescript definitions for z85 :( 7: import z85 from 'z85' 8: import chai from 'chai' 9: import * as security from '../../lib/insecurity' </pre>		
M	frontend/src/app/score-board/components filter-settings/pipes difficulty-selection-summary.pipe.ts <b>(Line 34)</b>	<b>S6660</b> 'If' statement should not be the only statement in 'else' block
<b>■ Problematic Code:</b> <pre> 31:     if (currentGroup === null) { 32:         currentGroup = { start: difficulty, end: difficulty } 33:     } else { &gt;&gt;&gt; 34:         if (difficulty === currentGroup.end + 1) { 35:             currentGroup.end = difficulty 36:         } else { 37:             difficultyGroups.push(currentGroup) </pre>		
M	frontend/src/app/wallet-web3 wallet-web3.component.ts <b>(Line 72)</b>	<b>S1854</b> Remove this useless assignment to variable "txConfirmation".
<b>■ Problematic Code:</b> <pre> 69:         value: ethers.utils.parseEther(depositAmount) 70:     }) 71:     // eslint-disable-next-line @typescript-eslint/no-unused-vars &gt;&gt;&gt; 72:     const txConfirmation = await transaction.wait() 73:     this.getUserEthBalance() 74: } catch (error) { 75:     this.errorMessage = error.message </pre>		
M	frontend/src/app/wallet-web3 wallet-web3.component.ts <b>(Line 90)</b>	<b>S1854</b> Remove this useless assignment to variable "txConfirmation".
<b>■ Problematic Code:</b> <pre> 87:         ethers.utils.parseEther(withdrawalAmount) 88:     ) 89:     // eslint-disable-next-line @typescript-eslint/no-unused-vars &gt;&gt;&gt; 90:     const txConfirmation = await transaction.wait() 91:     this.getUserEthBalance() 92: } catch (error) { 93:     this.errorMessage = error.message </pre>		
M	routes/checkKeys.ts <b>(Line 21)</b>	<b>S6660</b> 'If' statement should not be the only statement in 'else' block

<p>■ <b>Problematic Code:</b></p> <pre> 18:         if (req.body.privateKey === privateKey) { 19:             res.status(200).json({ success: true, message: 'Challenge successfully solved', status: challenges.nftUnlockChallenge }) 20:         } else { &gt;&gt;&gt; 21:             if (req.body.privateKey === address) { 22:                 res.status(401).json({ success: false, message: 'Looks like you entered the public address of my ethereum wallet!', status: challenges.nftUnlockChallenge }) 23:             } else if (req.body.privateKey === publicKey) { 24:                 res.status(401).json({ success: false, message: 'Looks like you entered the public key of my ethereum wallet!', status: challenges.nftUnlockChallenge }) </pre>		
M	Dockerfile (Line 19)	<p><b>S6570</b></p> <p>Surround this variable with double quotes; otherwise, it can lead to unexpected behavior.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 16: RUN rm il8n/*.json    true 17: 18: ARG CYCLONEDX_NPM_VERSION=latest &gt;&gt;&gt; 19: RUN npm install -g @cyclonedx/cyclonedx-npm@\$CYCLONEDX_NPM_VERSION 20: RUN npm run sbom 21: 22: FROM gcr.io/distroless/nodejs22-debian12 </pre>		
M	data/static/codefixes exposedMetricsChallenge_1.ts (Line 18)	<p><b>S4624</b></p> <p>Refactor this code to not use nested template literals.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 15: metricsUpdateLoop = Metrics.updateLoop() 16: 17: server.listen(port, () =&gt; { &gt;&gt;&gt; 18:     logger.info(colors.cyan(`Server listening on port \${colors.bold(`\${port}`)}`)) 19:     startupGauge.set({ task: 'ready' }, (Date.now() - startTime) / 1000) 20:     if (process.env.BASE_PATH !== '') { 21:         logger.info(colors.cyan(`Server using proxy base path \${colors.bold(`\${process.env.BASE_PATH}`)} for redirects`)) </pre>		
M	data/static/codefixes exposedMetricsChallenge_1.ts (Line 21)	<p><b>S4624</b></p> <p>Refactor this code to not use nested template literals.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 18:     logger.info(colors.cyan(`Server listening on port \${colors.bold(`\${port}`)}`)) 19:     startupGauge.set({ task: 'ready' }, (Date.now() - startTime) / 1000) 20:     if (process.env.BASE_PATH !== '') { &gt;&gt;&gt; 21:         logger.info(colors.cyan(`Server using proxy base path \${colors.bold(`\${process.env.BASE_PATH}`)} for redirects`)) 22:     } 23:     registerWebsocketEvents(server) 24:     if (readyCallback) { </pre>		



<div>M</div>	data/static/codefixes exposedMetricsChallenge_2.ts (Line 15)	<b>S4624</b> Refactor this code to not use nested template literals.
<div> <div>■ Problematic Code:</div> <pre> 12:   process.env.BASE_PATH = process.env.BASE_PATH ?? config.get('server.basePath') 13: 14:   server.listen(port, () =&gt; { &gt;&gt;&gt; 15:     logger.info(colors.cyan(`Server listening on port \${colors.bold(`\${port}`)}`)) 16:     startupGauge.set({ task: 'ready' }, (Date.now() - startTime) / 1000) 17:     if (process.env.BASE_PATH !== '') { 18:       logger.info(colors.cyan(`Server using proxy base path \${colors.bold(`\${process.env.BASE_PATH}`)} for redirects`)) </pre> </div>		
<div>M</div>	data/static/codefixes exposedMetricsChallenge_2.ts (Line 18)	<b>S4624</b> Refactor this code to not use nested template literals.
<div> <div>■ Problematic Code:</div> <pre> 15:   logger.info(colors.cyan(`Server listening on port \${colors.bold(`\${port}`)}`)) 16:   startupGauge.set({ task: 'ready' }, (Date.now() - startTime) / 1000) 17:   if (process.env.BASE_PATH !== '') { &gt;&gt;&gt; 18:     logger.info(colors.cyan(`Server using proxy base path \${colors.bold(`\${process.env.BASE_PATH}`)} for redirects`)) 19:   } 20:   registerWebsocketEvents(server) 21:   if (readyCallback) { </pre> </div>		
<div>M</div>	data/static/codefixes exposedMetricsChallenge_3_correc t.ts (Line 18)	<b>S4624</b> Refactor this code to not use nested template literals.
<div> <div>■ Problematic Code:</div> <pre> 15:   metricsUpdateLoop = Metrics.updateLoop() 16: 17:   server.listen(port, () =&gt; { &gt;&gt;&gt; 18:     logger.info(colors.cyan(`Server listening on port \${colors.bold(`\${port}`)}`)) 19:     startupGauge.set({ task: 'ready' }, (Date.now() - startTime) / 1000) 20:     if (process.env.BASE_PATH !== '') { 21:       logger.info(colors.cyan(`Server using proxy base path \${colors.bold(`\${process.env.BASE_PATH}`)} for redirects`)) </pre> </div>		
<div>M</div>	data/static/codefixes exposedMetricsChallenge_3_correc t.ts (Line 21)	<b>S4624</b> Refactor this code to not use nested template literals.

<p>■ <b>Problematic Code:</b></p> <pre> 18:     logger.info(colors.cyan(`Server listening on port \${colors.bold(`\${port}`)}) 19:     startupGauge.set({ task: 'ready' }, (Date.now() - startTime) / 1000) 20:     if (process.env.BASE_PATH !== '') { &gt;&gt;&gt; 21:         logger.info(colors.cyan(`Server using proxy base path \${colors.bold(`\${process.env.BASE_PATH}`)} for redirects`)) 22:     } 23:     registerWebsocketEvents(server) 24:     if (readyCallback) { </pre>		
M	lib/accuracy.ts (Line 58)	<b>S3358</b> Extract this nested ternary operation into an independent statement.
<p>■ <b>Problematic Code:</b></p> <pre> 55:     if (solves[challengeKey][phase]) { 56:         accuracy = 1 / solves[challengeKey].attempts[phase] 57:     } &gt;&gt;&gt; 58:     logger.info(`Accuracy for '\${phase} == 'fix it' ? 'Fix It' : 'Find It'` phase of coding challenge \${colors.cyan(challengeKey)}: \${accuracy &gt; 0.5 ? colors.green(accuracy.toString()) : (accuracy &gt; 0.25 ? colors.yellow(accuracy.toString()) : colors.red(accuracy.toString()))}`) 59:     return accuracy 60: } 61: </pre>		
M	lib/antiCheat.ts (Line 102)	<b>S3358</b> Extract this nested ternary operation into an independent statement.
<p>■ <b>Problematic Code:</b></p> <pre> 99:     const minutesSincePreviousSolve = (timestamp.getTime() - previous().timestamp.getTime()) / 60000 100:     cheatScore += Math.max(0, 1 - (minutesSincePreviousSolve / minutesExpectedToSolve)) 101: &gt;&gt;&gt; 102:     logger.info(`Cheat score for "Find it" phase of \${challenge.key == 'scoreBoardChallenge' &amp;&amp; config.get('hackingInstructor.isEnabled') ? 'tutorial ' : ''}\${colors.cyan(challenge.key)} solved in \${Math.round(minutesSincePreviousSolve)}min (expected ~\${minutesExpectedToSolve}min): \${cheatScore &lt; 0.33 ? colors.green(cheatScore.toString()) : (cheatScore &lt; 0.66 ? colors.yellow(cheatScore.toString()) : colors.red(cheatScore.toString()))}`) 103:     solves.push({ challenge, phase: 'find it', timestamp, cheatScore }) 104: 105:     return cheatScore </pre>		
M	lib/antiCheat.ts (Line 117)	<b>S3358</b> Extract this nested ternary operation into an independent statement.

<p>■ <b>Problematic Code:</b></p> <pre> 114:   const minutesSincePreviousSolve = (timestamp.getTime() - previous().timestamp.getTime()) / 60000 115:   cheatScore += Math.max(0, 1 - (minutesSincePreviousSolve / minutesExpectedToSolve)) 116: &gt;&gt;&gt; 117:   logger.info(`Cheat score for "Fix it" phase of \${colors.cyan(challenge.key)} solved in \${Math.round(minutesSincePreviousSolve)}min (expected ~\${minutesExpectedToSolve}min): \${cheatScore &lt; 0.33 ? colors.green(cheatScore.toString()) : (cheatScore &lt; 0.66 ? colors.yellow(cheatScore.toString()) : colors.red(cheatScore.toString()))}`) 118:   solves.push({ challenge, phase: 'fix it', timestamp, cheatScore }) 119:   return cheatScore 120: }</pre>	
<p><b>M</b></p> <p>lib/insecurity.ts (Line 61)</p>	<p><b>S6397</b> Replace this character class by the character itself.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 58: export const decode = (token: string) =&gt; { return jws.decode(token)?.payload } 59: 60: export const sanitizeHtml = (html: string) =&gt; sanitizeHtmlLib(html) &gt;&gt;&gt; 61: export const sanitizeLegacy = (input = '') =&gt; input.replace(/&lt;(?:\w+)\W+?[\w]/gi, '') 62: export const sanitizeFilename = (filename: string) =&gt; sanitizeFilenameLib(filename) 63: export const sanitizeSecure = (html: string): string =&gt; { 64:   const sanitized = sanitizeHtml(html)</pre>	
<p><b>M</b></p> <p>lib/startup/validateConfig.ts (Line 101)</p>	<p><b>S4624</b> Refactor this code to not use nested template literals.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 98:   const matchingProducts = products.filter((product) =&gt; product[key]) 99:   // @ts-expect-error FIXME implicit any type issue 100:   if (extra.key &amp;&amp; matchingProducts.length === 1 &amp;&amp; !matchingProducts[0][extra.key]) { &gt;&gt;&gt; 101:     logger.warn(`Product \${colors.italic(matchingProducts[0].name)} configured as \${colors.italic(name)} doesn't contain necessary \${colors.italic(`\${extra.name}`)} (\${colors.red('NOT OK')})`) 102:     success = false 103:   } 104: }</pre>	
<p><b>M</b></p> <p>lib/utils.ts (Line 22)</p>	<p><b>S1134</b> Take the required action to fix the issue indicated by this comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 19: import isWindows from './is-windows' 20: export { default as isDocker } from './is-docker' 21: export { default as isWindows } from './is-windows' &gt;&gt;&gt; 22: // import isGitpod from 'is-gitpod' // FIXME Roll back to this when https://github.com/dword-design/is-gitpod/issues/94 is resolve 23: const isGitpod = () =&gt; false 24: 25: const months = ['JAN', 'FEB', 'MAR', 'APR', 'MAY', 'JUN', 'JUL', 'AUG', 'SEP', 'OCT', 'NOV', 'DEC']</pre>	

M	server.ts (Line 727)	<b>S4624</b> Refactor this code to not use nested template literals.
<b>Problematic Code:</b>		
<pre> 724:   metricsUpdateLoop = Metrics.updateLoop() // vuln-code-snippet neutral-line exposedMetricsChallenge 725: 726:   server.listen(port, () =&gt; { &gt;&gt;&gt; 727:     logger.info(colors.cyan(`Server listening on port \${colors.bold(`\${port}`)}`)) 728:     startupGauge.set({ task: 'ready' }, (Date.now() - startTime) / 1000) 729:     if (process.env.BASE_PATH !== '') { 730:       logger.info(colors.cyan(`Server using proxy base path \${colors.bold(`\${process.env.BASE_PATH}`)} for redirects`)) </pre>		
M	server.ts (Line 730)	<b>S4624</b> Refactor this code to not use nested template literals.
<b>Problematic Code:</b>		
<pre> 727:     logger.info(colors.cyan(`Server listening on port \${colors.bold(`\${port}`)}`)) 728:     startupGauge.set({ task: 'ready' }, (Date.now() - startTime) / 1000) 729:     if (process.env.BASE_PATH !== '') { &gt;&gt;&gt; 730:       logger.info(colors.cyan(`Server using proxy base path \${colors.bold(`\${process.env.BASE_PATH}`)} for redirects`)) 731:     } 732:     registerWebsocketEvents(server) 733:     if (readyCallback) { </pre>		
M	test/api/productReviewApiSpec.ts (Line 42)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>Problematic Code:</b>		
<pre> 39:     .expect('jsonTypes', reviewResponseSchema) 40:   }) 41: &gt;&gt;&gt; 42:   xit('GET product reviews by alphanumeric non-mongoDB-command product id', () =&gt; { // FIXME Turn on when #1960 is resolved 43:     return frisby.get(`\${REST_URL}/products/kaboom/reviews`) 44:     .expect('status', 400) 45:   }) </pre>		
M	test/cypress/e2e/profile.spec.ts (Line 107)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>Problematic Code:</b>		
<pre> 104:     headers: { 105:       'Content-type': 'application/x-www-form-urlencoded', 106:       Authorization: `Bearer \${localStorage.getItem('token')}`, &gt;&gt;&gt; 107:       Origin: 'http://html5edit.squarefree.com', // FIXME Not allowed by browser due to "unsafe header not permitted" 108:       Cookie: `token=\${localStorage.getItem('token')}` // FIXME Not allowed by browser due to "unsafe header not permitted" 109:     }, 110:     body: formData </pre>		

M	test/cypress/e2e/profile.spec.ts (Line 108)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>Problematic Code:</b>		
<pre> 105:         'Content-type': 'application/x-www-form-urlencoded', 106:         Authorization: `Bearer \${localStorage.getItem('token')}`, 107:         Origin: 'http://htmledit.squarefree.com', // FIXME Not allowed by browser due to "unsafe header not permitted" &gt;&gt;&gt; 108:         Cookie: `token=\${localStorage.getItem('token')}` // FIXME Not allowed by browser due to "unsafe header not permitted" 109:         }, 110:         body: formData 111:     }) </pre>		
M	test/cypress/e2e/complain.spec.ts (Line 14)	<b>S6666</b> Use the spread operator instead of '.apply()'.
<b>Problematic Code:</b>		
<pre> 11:     describe('challenge "uploadSize"', () =&gt; { 12:         it('should be possible to upload files greater 100 KB directly through backend', () =&gt; { 13:             cy.window().then(async () =&gt; { &gt;&gt;&gt; 14:                 const over100KB = Array.apply(null, new Array(11000)).map( 15:                     // eslint-disable-next-line @typescript-eslint/unbound-method 16:                     String.prototype.valueOf, 17:                     '1234567890' </pre>		
M	test/api/metricsApiSpec.ts (Line 14)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>Problematic Code:</b>		
<pre> 11: const API_URL = 'http://localhost:3000/metrics' 12: 13: describe('/metrics', () =&gt; { &gt;&gt;&gt; 14:     xit('GET metrics via public API that are available instantaneously', () =&gt; { // FIXME Flaky on CI/CD on at least Windows 15:         return frisby.get(API_URL) 16:             .expect('status', 200) 17:             .expect('header', 'content-type', /text\/plain/) </pre>		
M	test/api/metricsApiSpec.ts (Line 33)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>Problematic Code:</b>		
<pre> 30:         .expect('bodyContains', /^http_requests_count{status_code="[0-9]XX",app=".*"} [0-9]*\$/gm) 31:     }) 32: &gt;&gt;&gt; 33:     xit('GET file upload metrics via public API', () =&gt; { // FIXME Flaky on CI/CD on at least Windows 34:         const file = path.resolve(__dirname, '../files/validSizeAndTypeForClient.pdf') 35:         const form = frisby.formData() 36:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the FileStream type </pre>		

<div>M</div>	test/api/metricsApiSpec.ts (Line 49)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 46:         }) 47:     }) 48: &gt;&gt;&gt; 49:     xit('GET file upload error metrics via public API', () =&gt; { // FIXME Flaky on CI/CD on at least Windows 50:         const file = path.resolve(__dirname, '../files/invalidSizeForServer.pdf') 51:         const form = frisby.formData() 52:         form.append('file', fs.createReadStream(file) as unknown as Blob) // casting to blob as the frisby types are wrong and wont accept the fileStream type </pre> </div>		
<div>M</div>	frontend/src/app/last-login-ip last-login-ip.component.spec.ts (Line 60)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 57:         expect(console.log).toHaveBeenCalled() 58:     }) 59: &gt;&gt;&gt; 60:     xit('should set Last-Login IP from JWT as trusted HTML', () =&gt; { // FIXME Expected state seems to leak over from previous test case occasionally 61:         localStorage.setItem('token', 'eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJkYXRhIjpb7Im xhc3Rmb2dpbklwIjoiMS4yLjMuNCJ9fQ.RAKmdqWNypuOxv3SDjP04xMKvd1CddKvDFYDBfUt3bg') 62:         component.ngOnInit() 63:         expect(sanitizer.bypassSecurityTrustHtml).toHaveBeenCalled() all&gt;') </pre> </div>		
<div>M</div>	frontend/src/app/last-login-ip last-login-ip.component.spec.ts (Line 66)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 63:         expect(sanitizer.bypassSecurityTrustHtml).toHaveBeenCalled() all&gt;') 64:     }) 65: &gt;&gt;&gt; 66:     xit('should not set Last-Login IP if none is present in JWT', () =&gt; { // FIXME Expected state seems to leak over from previous test case occasionally 67:         localStorage.setItem('token', 'eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJkYXRhIjpb7fX 0.bVBhvl16Iaer3aUdoOeyR8YZe2S2DfhGAXTGfd9enLw') 68:         component.ngOnInit() 69:         expect(sanitizer.bypassSecurityTrustHtml).not.toHaveBeenCalled() </pre> </div>		
<div>M</div>	test/cypress/e2e/totpSetup.spec.ts (Line 30)	<b>S125</b> Remove this commented out code.

	<p>■ <b>Problematic Code:</b></p> <pre> 27:         cy.get('#initialToken') 28:         .should('have.attr', 'data-test-totp-secret') 29:         .then((\$val) =&gt; { &gt;&gt;&gt; 30:             // console.log(\$val); 31:             cy.get('#currentPasswordSetup').type('K1f.....') 32: 33:             cy.task&lt;string&gt;('GenerateAuthenticator', \$val).then((secret: string) =&gt; { </pre>	
<div>M</div>	test/cypress/e2e/profile.spec.ts (Line 63)	<b>S125</b> Remove this commented out code.
	<p>■ <b>Problematic Code:</b></p> <pre> 60:         '/solve/challenges/server-side?key=tRy_H4rd3r_n0thIng_iS_Imp0ssibl3' 61:         ) 62:         cy.visit('/') &gt;&gt;&gt; 63:         // void browser.driver.sleep(10000); 64:         // void browser.waitForAngularEnabled(true); 65:         cy.expectChallengeSolved({ challenge: 'SSTi' }) 66:     } </pre>	
<div>M</div>	test/cypress/e2e/profile.spec.ts (Line 72)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
	<p>■ <b>Problematic Code:</b></p> <pre> 69:     }) 70: 71:     describe('challenge "csrf"', () =&gt; { &gt;&gt;&gt; 72:         // FIXME Only works on Chrome &lt;80 but Protractor uses latest Chrome version. Test can probably never be turned on again. 73:         xit('should be possible to perform a CSRF attack against the user profile page', () =&gt; { 74:             cy.visit('http://html5edit.squarefree.com') 75:             /* The script executed below is equivalent to pasting this string into http://html5edit.squarefree.com: */ </pre>	
<div>M</div>	lib/startup/validateChatBot.ts (Line 36)	<b>S6660</b> 'If' statement should not be the only statement in 'else' block
	<p>■ <b>Problematic Code:</b></p> <pre> 33:         logger.warn(`Intent \${colors.italic(intent)} is missing in chatbot training data (\${colors.red('NOT OK')})`) 34:         success = false 35:     } else { &gt;&gt;&gt; 36:         if (intentData[0].answers.filter((answer: { action: string, handler: string }) =&gt; answer.action === 'function' &amp;&amp; answer.handler === handler).length === 0) { 37:             logger.warn(`Answer with \${colors.italic('function')} action and handler \${colors.italic(handler)} is missing for intent \${colors.italic(intent)} (\${colors.red('NOT OK')})`) 38:             success = false 39:         } </pre>	
<div>M</div>	rsn/rsnUtil.ts (Line 129)	<b>S4043</b> Move this array "sort" operation to a separate statement or replace it with "toSorted".

<p>■ <b>Problematic Code:</b></p> <pre> 126: function checkData (data: CacheData, fileData: CacheData) { 127:   const filesWithDiff = [] 128:   for (const key in data) { &gt;&gt;&gt; 129:     const fileDataValueAdded = fileData[key].added.sort((a, b) =&gt; a - b) 130:     const dataValueAdded = data[key].added.sort((a, b) =&gt; a - b) 131:     const fileDataValueRemoved = fileData[key].added.sort((a, b) =&gt; a - b) 132:     const dataValueAddedRemoved = data[key].added.sort((a, b) =&gt; a - b) </pre>		
M	rsn/rsnUtil.ts (Line 130)	<p><b>S4043</b></p> <p>Move this array "sort" operation to a separate statement or replace it with "toSorted".</p>
<p>■ <b>Problematic Code:</b></p> <pre> 127:   const filesWithDiff = [] 128:   for (const key in data) { 129:     const fileDataValueAdded = fileData[key].added.sort((a, b) =&gt; a - b) &gt;&gt;&gt; 130:     const dataValueAdded = data[key].added.sort((a, b) =&gt; a - b) 131:     const fileDataValueRemoved = fileData[key].added.sort((a, b) =&gt; a - b) 132:     const dataValueAddedRemoved = data[key].added.sort((a, b) =&gt; a - b) 133:     if (fileDataValueAdded.length === dataValueAdded.length &amp;&amp; fileDataValueRemoved.length === dataValueAddedRemoved.length) { </pre>		
M	rsn/rsnUtil.ts (Line 131)	<p><b>S4043</b></p> <p>Move this array "sort" operation to a separate statement or replace it with "toSorted".</p>
<p>■ <b>Problematic Code:</b></p> <pre> 128:   for (const key in data) { 129:     const fileDataValueAdded = fileData[key].added.sort((a, b) =&gt; a - b) 130:     const dataValueAdded = data[key].added.sort((a, b) =&gt; a - b) &gt;&gt;&gt; 131:     const fileDataValueRemoved = fileData[key].added.sort((a, b) =&gt; a - b) 132:     const dataValueAddedRemoved = data[key].added.sort((a, b) =&gt; a - b) 133:     if (fileDataValueAdded.length === dataValueAdded.length &amp;&amp; fileDataValueRemoved.length === dataValueAddedRemoved.length) { 134:       if (!dataValueAdded.every((val: number, ind: number) =&gt; fileDataValueAdded[ind] === val)) { </pre>		
M	rsn/rsnUtil.ts (Line 132)	<p><b>S4043</b></p> <p>Move this array "sort" operation to a separate statement or replace it with "toSorted".</p>
<p>■ <b>Problematic Code:</b></p> <pre> 129:     const fileDataValueAdded = fileData[key].added.sort((a, b) =&gt; a - b) 130:     const dataValueAdded = data[key].added.sort((a, b) =&gt; a - b) 131:     const fileDataValueRemoved = fileData[key].added.sort((a, b) =&gt; a - b) &gt;&gt;&gt; 132:     const dataValueAddedRemoved = data[key].added.sort((a, b) =&gt; a - b) 133:     if (fileDataValueAdded.length === dataValueAdded.length &amp;&amp; fileDataValueRemoved.length === dataValueAddedRemoved.length) { 134:       if (!dataValueAdded.every((val: number, ind: number) =&gt; fileDataValueAdded[ind] === val)) { 135:         console.log(colors.red(key)) </pre>		
M	lib/utlis.ts (Line 41)	<p><b>S6557</b></p> <p>Use 'String#startsWith' method instead.</p>



<p>■ <b>Problematic Code:</b></p> <pre> 38:   return startsWith(url, 'http') 39: } 40: &gt;&gt;&gt; 41: export const startsWith = (str: string, prefix: string) =&gt; str ? str.indexOf(prefix) === 0 : false 42: 43: export const endsWith = (str?: string, suffix?: string) =&gt; (str &amp;&amp; suffix) ? str.includes(suffix, str.length - suffix.length) : false 44: </pre>		
M	frontend/src/environments/environm ent.ts (Line 21)	<b>S125</b> Remove this commented out code.
<p>■ <b>Problematic Code:</b></p> <pre> 18:  * import the following file, but please comment it out in production mode 19:  * because it will have performance impact when throw error 20:  */ &gt;&gt;&gt; 21: // import 'zone.js/plugins/zone-error'; // Included with Angular CLI. 22: </pre>		
M	frontend/src/hacking-instructor challenges/codingChallenges.ts (Line 20)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<p>■ <b>Problematic Code:</b></p> <pre> 17:     fixture: 'app-navbar', 18:     fixtureAfter: true, 19:     unskippable: true, &gt;&gt;&gt; 20:     resolved: waitForAngularRouteToBeVisited('score-board') // FIXME The tutorial does not progress automatically. Workaround ^^^^^^^^^^^^^^^^^ instruction above should be removed when fixed. 21:   }, 22:   { 23:     text: </pre>		
M	data/static/codefixes dbSchemaChallenge_1.ts (Line 7)	<b>S1854</b> Remove this useless assignment to variable "dataString".
<p>■ <b>Problematic Code:</b></p> <pre> 4:   criteria = (criteria.length &lt;= 200) ? criteria : criteria.substring(0, 200) 5:   models.sequelize.query("SELECT * FROM Products WHERE ((name LIKE '%"+criteria+"%' OR description LIKE '%"+criteria+"%') AND deletedAt IS NULL) ORDER BY name") 6:   .then(([products]: any) =&gt; { &gt;&gt;&gt; 7:     const dataString = JSON.stringify(products) 8:     for (let i = 0; i &lt; products.length; i++) { 9:       products[i].name = req.__(products[i].name) 10:      products[i].description = req.__(products[i].description) </pre>		
M	data/static/codefixes dbSchemaChallenge_2_correct.ts (Line 9)	<b>S1854</b> Remove this useless assignment to variable "dataString".

<p>■ <b>Problematic Code:</b></p> <pre> 6:         `SELECT * FROM Products WHERE ((name LIKE '%:criteria%' OR description LIKE ':criteria%') AND deletedAt IS NULL) ORDER BY name`, 7:         { replacements: { criteria } } 8:     ).then(([products]: any) =&gt; { &gt;&gt;&gt; 9:         const dataString = JSON.stringify(products) 10:         for (let i = 0; i &lt; products.length; i++) { 11:             products[i].name = req.__(products[i].name) 12:             products[i].description = req.__(products[i].description) </pre>		
M	data/static/codefixes dbSchemaChallenge_3.ts (Line 13)	<b>S1854</b> Remove this useless assignment to variable "dataString".
<p>■ <b>Problematic Code:</b></p> <pre> 10:     } 11:     models.sequelize.query(`SELECT * FROM Products WHERE ((name LIKE '%\${criteria}%' OR description LIKE '%\${criteria}%') AND deletedAt IS NULL) ORDER BY name`) 12:     .then(([products]: any) =&gt; { &gt;&gt;&gt; 13:         const dataString = JSON.stringify(products) 14:         for (let i = 0; i &lt; products.length; i++) { 15:             products[i].name = req.__(products[i].name) 16:             products[i].description = req.__(products[i].description) </pre>		
M	data/static/codefixes unionSqlInjectionChallenge_1.ts (Line 8)	<b>S1854</b> Remove this useless assignment to variable "dataString".
<p>■ <b>Problematic Code:</b></p> <pre> 5:     criteria.replace(/" "'; and or/i, "") 6:     models.sequelize.query(`SELECT * FROM Products WHERE ((name LIKE '%\${criteria}%' OR description LIKE '%\${criteria}%') AND deletedAt IS NULL) ORDER BY name`) 7:     .then(([products]: any) =&gt; { &gt;&gt;&gt; 8:         const dataString = JSON.stringify(products) 9:         for (let i = 0; i &lt; products.length; i++) { 10:             products[i].name = req.__(products[i].name) 11:             products[i].description = req.__(products[i].description) </pre>		
M	data/static/codefixes unionSqlInjectionChallenge_2_corre ct.ts (Line 9)	<b>S1854</b> Remove this useless assignment to variable "dataString".
<p>■ <b>Problematic Code:</b></p> <pre> 6:         `SELECT * FROM Products WHERE ((name LIKE '%:criteria%' OR description LIKE ':criteria%') AND deletedAt IS NULL) ORDER BY name`, 7:         { replacements: { criteria } } 8:     ).then(([products]: any) =&gt; { &gt;&gt;&gt; 9:         const dataString = JSON.stringify(products) 10:         for (let i = 0; i &lt; products.length; i++) { 11:             products[i].name = req.__(products[i].name) 12:             products[i].description = req.__(products[i].description) </pre>		

<div>M</div>	data/static/codefixes unionSqlInjectionChallenge_3.ts (Line 12)	<b>S1854</b> Remove this useless assignment to variable "dataString".
<div> <div>■ Problematic Code:</div> <pre> 9:      } 10:     models.sequelize.query(`SELECT * FROM Products WHERE ((name LIKE '%\${criteria}%' OR description LIKE '%\${criteria}%') AND deletedAt IS NULL) ORDER BY name`) 11:     .then(([products]: any) =&gt; { &gt;&gt;&gt; 12:         const dataString = JSON.stringify(products) 13:         for (let i = 0; i &lt; products.length; i++) { 14:             products[i].name = req.__(products[i].name) 15:             products[i].description = req.__(products[i].description) </pre> </div>		
<div>M</div>	data/static/codefixes noSqlReviewsChallenge_1.ts (Line 3)	<b>S1854</b> Remove this useless assignment to variable "user".
<div> <div>■ Problematic Code:</div> <pre> 1: export function updateProductReviews () { 2:     return (req: Request, res: Response, next: NextFunction) =&gt; { &gt;&gt;&gt; 3:         const user = security.authenticatedUsers.from(req) 4: 5:         if (req.body.id['\$ne'] !== undefined) { 6:             res.status(400).send() </pre> </div>		
<div>M</div>	data/static/codefixes noSqlReviewsChallenge_2.ts (Line 3)	<b>S1854</b> Remove this useless assignment to variable "user".
<div> <div>■ Problematic Code:</div> <pre> 1: export function updateProductReviews () { 2:     return (req: Request, res: Response, next: NextFunction) =&gt; { &gt;&gt;&gt; 3:         const user = security.authenticatedUsers.from(req) 4:         db.reviewsCollection.update( 5:             { _id: req.body.id }, 6:             { \$set: { message: req.body.message } } </pre> </div>		
<div>M</div>	data/static/codefixes noSqlReviewsChallenge_3_correct.ts (Line 3)	<b>S1854</b> Remove this useless assignment to variable "user".
<div> <div>■ Problematic Code:</div> <pre> 1: export function updateProductReviews () { 2:     return (req: Request, res: Response, next: NextFunction) =&gt; { &gt;&gt;&gt; 3:         const user = security.authenticatedUsers.from(req) 4: 5:         if (typeof req.body.id !== 'string') { 6:             res.status(400).send() </pre> </div>		
<div>M</div>	data/static/codefixes forgedReviewChallenge_3.ts (Line 3)	<b>S1854</b> Remove this useless assignment to variable "user".

<b>■ Problematic Code:</b> <pre> 1: export function updateProductReviews () { 2:   return (req: Request, res: Response, next: NextFunction) =&gt; { &gt;&gt;&gt; 3:     const user = security.authenticatedUsers.from(req) 4:     db.reviewsCollection.update( 5:       { _id: req.body.id }, 6:       { \$set: { message: req.body.message } } </pre>		
M	test/api/loginApiSpec.ts (Line 261)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>■ Problematic Code:</b> <pre> 258:   }) 259: }) 260: &gt;&gt;&gt; 261:   xit('GET last login IP will be saved as remote IP when True-Client-IP is not present', () =&gt; { // FIXME Started to fail regularly on CI under Linux 262:     return frisby.post(REST_URL + '/user/login', { 263:       headers: jsonHeader, 264:       body: { </pre>		
M	test/api/productApiSpec.ts (Line 103)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>■ Problematic Code:</b> <pre> 100:     .expect('json', 'data', { description: '&lt;a href="http://kimminich.de" target="_blank"&gt;More...&lt;/a&gt;' }) 101:   }) 102: &gt;&gt;&gt; 103:   xit('PUT update existing product does not filter XSS attacks', () =&gt; { // FIXME Started to fail regularly on CI under Linux 104:     return frisby.put(API_URL + '/Products/1', { 105:       header: jsonHeader, 106:       body: { </pre>		
M	test/server/b2bOrderSpec.ts (Line 31)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<b>■ Problematic Code:</b> <pre> 28:     challenges.rceChallenge = { solved: false, save } as unknown as Challenge 29:   }) 30: &gt;&gt;&gt; 31:   xit('infinite loop payload does not succeed but solves "rceChallenge"', () =&gt; { // FIXME Started failing on Linux regularly 32:     req.body.orderLinesData = '(function dos() { while(true); })()' 33: 34:     b2bOrder()(req, res, next) </pre>		
M	frontend/src/assets/public/css dataErasure.css (Line 104)	<b>S4666</b> Unexpected duplicate selector "img", first used at line 86

<div> <div>■ Problematic Code:</div> <pre> 101: .home-page { 102:   margin-top: 30px; 103: } &gt;&gt;&gt; 104: img { 105:   padding-top: 5px; 106:   padding-left: 50px; 107: }</pre> </div>		
M	test/server/insecuritySpec.ts (Line 58)	<b>S4623</b> Remove this redundant "undefined".
<div> <div>■ Problematic Code:</div> <pre> 55: 56:   describe('discountFromCoupon', () =&gt; { 57:     it('returns undefined when not passing in a coupon code', () =&gt; { &gt;&gt;&gt; 58:       expect(security.discountFromCoupon(undefined)).toEqual(undefined) 59:     }) 60: 61:     it('returns undefined for malformed coupon code', () =&gt; {</pre> </div>		
M	test/server/insecuritySpec.ts (Line 145)	<b>S4623</b> Remove this redundant "undefined".
<div> <div>■ Problematic Code:</div> <pre> 142:   describe('sanitizeLegacy', () =&gt; { 143:     it('returns empty string for undefined input', () =&gt; { 144:       expect(security.sanitizeLegacy()).toEqual('') &gt;&gt;&gt; 145:       expect(security.sanitizeLegacy(undefined)).toEqual('') 146:     }) 147: 148:     it('returns input unchanged for plain text input', () =&gt; {</pre> </div>		
M	frontend/src/app/two-factor-auth-enter two-factor-auth-enter.component.spec.ts (Line 121)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 118:     expect(sessionStorage.getItem('bid')).toBe('42') 119:   }) 120: &gt;&gt;&gt; 121:   xit('should notify about user login after 2FA verification', () =&gt; { // FIXME Spy call is not registered at all 122:     component.verify() 123: 124:     expect(userService.isLoggedIn.next).toHaveBeenCalledWith(true)</pre> </div>		
M	frontend/src/hacking-instructor/helpers helpers.ts (Line 63)	<b>S1871</b> This branch's code block is the same as the block for the branch on line 61.

<p>■ <b>Problematic Code:</b></p> <pre> 60:     while (true) { 61:         if (options.ignoreCase &amp;&amp; inputElement.value.toLowerCase() !== value.toLowerCase()) { 62:             break &gt;&gt;&gt; 63:         } else if (!options.ignoreCase &amp;&amp; inputElement.value !== value) { 64:             break 65:         } 66:         await sleep(100) </pre>		
<p><b>M</b></p>	<p>frontend/src/hacking-instructor/helpers.ts (Line 46)</p>	<p><b>S1871</b> This branch's code block is the same as the block for the branch on line 44.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 43:     while (true) { 44:         if (options.ignoreCase &amp;&amp; inputElement.value.toLowerCase() === value.toLowerCase()) { 45:             break &gt;&gt;&gt; 46:         } else if (!options.ignoreCase &amp;&amp; inputElement.value === value) { 47:             break 48:         } 49:         await sleep(100) </pre>		
<p><b>M</b></p>	<p>frontend/src/hacking-instructor/helpers.ts (Line 81)</p>	<p><b>S1871</b> This branch's code block is the same as the block for the branch on line 79.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 78:     if (inputElement.value !== '') { 79:         if (options.ignoreCase &amp;&amp; inputElement.value.toLowerCase() !== value.toLowerCase()) { 80:             break &gt;&gt;&gt; 81:         } else if (!options.ignoreCase &amp;&amp; inputElement.value !== value) { 82:             break 83:         } 84:     } </pre>		
<p><b>M</b></p>	<p>test/api/internetResourcesSpec.ts (Line 17)</p>	<p><b>S1134</b> Take the required action to fix the issue indicated by this comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 14:         .expect('bodyContains', 'this coupled with Eurogium Edule was sometimes found fatal') 15:     }) 16: &gt;&gt;&gt; 17:     xit('for 7MS configuration (https://pastebin.com/8SMbWPxc)', () =&gt; { // FIXME Test would need to confirm/bypass PasteBin SMART filter to retrieve content 18:         return frisby.get('https://pastebin.com/8SMbWPxc') 19:         .expect('status', 200) 20:         .expect('bodyContains', 'TAYLOR SWIFT') </pre>		

<div>M</div>	test/api/internetResourcesSpec.ts (Line 34)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 31:         .expect('bodyContains', 'Note to self: Option (1) and (3) of the above should not be combined.') 32:     }) 33: &gt;&gt;&gt; 34:     xit('for Mozilla configuration (https://pastebin.com/t8jqEly7)', () =&gt; { // FIXME Test would need to confirm/bypass PasteBin SMART filter to retrieve content 35:         return frisby.get('https://pastebin.com/t8jqEly7') 36:         .expect('status', 200) 37:         .expect('bodyContains', 'Fixed a bug that, when this plugin was installed together with both the') </pre> </div>		
<div>M</div>	test/api/userProfileSpec.ts (Line 59)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 56:         .expect('status', 302) 57:     }) 58: &gt;&gt;&gt; 59:     xit('POST update username is forbidden for unauthenticated user', () =&gt; { // FIXME runs into "socket hang up" 60:         const form = frisby.formData() 61:         form.append('username', 'Localhorst') 62: </pre> </div>		
<div>M</div>	lib/startup/validateConfig.ts (Line 114)	<b>S4624</b> Refactor this code to not use nested template literals.
<div> <div>■ Problematic Code:</div> <pre> 111:     // @ts-expect-error FIXME any type issue 112:     const appliedSpecials = specialProducts.filter(({ key }) =&gt; product[key]) 113:     if (appliedSpecials.length &gt; 1) { &gt;&gt;&gt; 114:         logger.warn(`Product \${colors.italic(product.name)} is used as \${appliedSpecials.map(({ name }) =&gt; `\${colors.italic(name)}`).join(' and ')} but can only be used for one challenge (\${colors.red('NOT OK')}`) 115:         success = false 116:     } 117: }) </pre> </div>		
<div>M</div>	lib/startup/validateConfig.ts (Line 162)	<b>S4624</b> Refactor this code to not use nested template literals.

<div> <div>■ Problematic Code:</div> <pre> 159:   memories.forEach((memory) =&gt; { 160:       const appliedSpecials = specialMemories.filter(({ keys }) =&gt; memory[keys[0]] &amp;&amp; memory[keys[1]]) 161:       if (appliedSpecials.length &gt; 1) { &gt;&gt;&gt; 162:           logger.warn(`Memory \${colors.italic(memory.caption)} is used as \${appliedSpecials.map(({ name }) =&gt; `\${colors.italic(name)}`).join(' and ')} but can only be used for one challenge (\${colors.red('NOT OK')})`) 163:           success = false 164:       } 165:   }) </pre> </div>		
<div>M</div>	test/api/profileImageUploadSpec.ts (Line 141)	<b>S1134</b> Take the required action to fix the issue indicated by this comment.
<div> <div>■ Problematic Code:</div> <pre> 138:     }) 139: }) 140: &gt;&gt;&gt; 141:   xit('POST profile image URL forbidden for anonymous user', () =&gt; { // FIXME runs into "socket hang up" 142:       const form = frisby.formData() 143:       form.append('imageUrl', 'cataas.com/cat') 144: </pre> </div>		
<div>M</div>	test/files/decrypt.py (Line 9)	<b>PrintStatementUsage</b> Replace print statement by built-in function.
<div> <div>■ Problematic Code:</div> <pre> 6: d = 8948942500927444436822854592177309391966958606588425744549785445648767483962981839 09349419732628796167979706089172836798754993315741611138540888132754881105882471930775825272784 37906504015680623423550067240042466665654232383502922215493623289472138866445818789127946123407 807725702626644091036502372545139713 7: 8: with open('announcement_encrypted.md', 'r') as fl: &gt;&gt;&gt; 9:     print "".join([chr(pow(int(f[:-1]), d, N)) for f in fl.readlines()]) 10: </pre> </div>		
<div>M</div>	test/files/decrypt_bruteforce.py (Line 15)	<b>PrintStatementUsage</b> Replace print statement by built-in function.
<div> <div>■ Problematic Code:</div> <pre> 12:     encrypted_chars[str(c)] = char 13: 14: with open('announcement_encrypted.md', 'r') as fl: &gt;&gt;&gt; 15:     print "".join([encrypted_chars[f[:-1]] for f in fl.readlines()]) 16: </pre> </div>		
<div>M</div>	frontend/src/app/deluxe-user deluxe-user.component.ts (Line 61)	<b>S6557</b> Use 'String#startsWith' method instead.



<b>■ Problematic Code:</b> <pre> 58:         if (config.application.logo) { 59:             let logo: string = config.application.logo 60: &gt;&gt;&gt; 61:         if (logo.substring(0, 4) === 'http') { 62:             logo = decodeURIComponent(logo.substring(logo.lastIndexOf('/') + 1)) 63:         } 64:         this.logoSrc = `assets/public/images/\${decalParam    logo}` </pre>		
<b>M</b>	test/smoke/Dockerfile (Line 1)	<b>S6596</b> Use a specific version tag for the image.
<b>■ Problematic Code:</b> <pre> &gt;&gt;&gt; 1: FROM alpine 2: 3: RUN apk add curl 4: </pre>		
<b>M</b>	test/smoke/Dockerfile (Line 3)	<b>S6587</b> Remove cache after installing packages or store it in a cache mount.
<b>■ Problematic Code:</b> <pre> 1: FROM alpine 2: &gt;&gt;&gt; 3: RUN apk add curl 4: 5: COPY smoke-test.sh smoke-test.sh 6: </pre>		
<b>M</b>	frontend/src/app/photo-wall mime-type.validator.ts (Line 38)	<b>S4165</b> Review this redundant assignment: "isValid" already holds the assigned value along all execution paths.
<b>■ Problematic Code:</b> <pre> 35:         isValid = true 36:         break 37:         default: &gt;&gt;&gt; 38:         isValid = false 39:         break 40:     } 41:     if (isValid) { </pre>		
<b>M</b>	frontend/src/app/photo-wall photo-wall.component.html (Line 14)	<b>S6851</b> Remove redundant word "image" from the "alt" attribute of your "img" tag.




<p>■ <b>Problematic Code:</b></p> <pre> 11:         &lt;div class="grid"&gt; 12:             @for (image of slideshowDataSource; track image) { 13:                 &lt;span class="container mat-elevation-z6"&gt; &gt;&gt;&gt; 14:                     &lt;img src="{{ image.url }}" alt="{{ image.caption }}" class="image"&gt; 15:                     &lt;div class="overlay"&gt; 16:                         &lt;div&gt;{{ image.caption }}&lt;/div&gt; 17:                     @if (twitterHandle) { </pre>		
M	frontend/src/app/search-result search-result.component.spec.ts (Line 264)	<b>S4623</b> Remove this redundant "undefined".
<p>■ <b>Problematic Code:</b></p> <pre> 261:     it('should not add anything to basket on error retrieving basket', fakeAsync(() =&gt; { 262:         basketService.find.and.returnValue(throwError('Error')) 263:         sessionStorage.setItem('bid', '815') &gt;&gt;&gt; 264:         component.addToBasket(undefined) 265:         expect(snackBar.open).not.toHaveBeenCalled() 266:     })) 267: </pre>		
M	frontend/src/app/search-result search-result.component.html (Line 40)	<b>S6819</b> Use or instead of the button role to ensure accessibility across all devices.
<p>■ <b>Problematic Code:</b></p> <pre> 37:         } 38:         &lt;div class="product" (click)="showDetail(item)" aria-label="Click for more information about the product" 39:             matTooltip="Click for more information" matTooltipPosition="above"&gt; &gt;&gt;&gt; 40:             &lt;img mat-card-image [src]='assets/public/images/products/'+item.image alt={{item.name}} 41:                 class="img-responsive img-thumbnail" role="button"&gt; 42:             &lt;div class="info-box"&gt; 43:                 &lt;div class="item-name"&gt;{{item.name}}&lt;/div&gt; </pre>		
M	routes/imageCaptcha.ts (Line 39)	<b>S3358</b> Extract this nested ternary operation into an independent statement.
<p>■ <b>Problematic Code:</b></p> <pre> 36: 37: export const verifyImageCaptcha = () =&gt; (req: Request, res: Response, next: NextFunction) =&gt; { 38:     const user = security.authenticatedUsers.from(req) &gt;&gt;&gt; 39:     const UserId = user ? user.data ? user.data.id : undefined : undefined 40:     ImageCaptchaModel.findAll({ 41:         limit: 1, 42:         where: { </pre>		
M	routes/languages.ts (Line 41)	<b>S3358</b> Extract this nested ternary operation into an independent statement.

<p>■ <b>Problematic Code:</b></p> <pre> 38:             icons: locale?.icons, 39:             shortKey: locale?.shortKey, 40:             percentage, &gt;&gt;&gt; 41:             gauge: (percentage &gt; 90 ? 'full' : (percentage &gt; 70 ? 'three-quarters' : (percentage &gt; 50 ? 'half' : (percentage &gt; 30 ? 'quarter' : 'empty')))) 42:             } 43:             if (!(fileName === 'en.json'    fileName === 'tlh_AA.json')) { 44:                 languages.push(lang) </pre>		
M	routes/languages.ts (Line 41)	<b>S3358</b> Extract this nested ternary operation into an independent statement.
<p>■ <b>Problematic Code:</b></p> <pre> 38:             icons: locale?.icons, 39:             shortKey: locale?.shortKey, 40:             percentage, &gt;&gt;&gt; 41:             gauge: (percentage &gt; 90 ? 'full' : (percentage &gt; 70 ? 'three-quarters' : (percentage &gt; 50 ? 'half' : (percentage &gt; 30 ? 'quarter' : 'empty')))) 42:             } 43:             if (!(fileName === 'en.json'    fileName === 'tlh_AA.json')) { 44:                 languages.push(lang) </pre>		
M	routes/languages.ts (Line 41)	<b>S3358</b> Extract this nested ternary operation into an independent statement.
<p>■ <b>Problematic Code:</b></p> <pre> 38:             icons: locale?.icons, 39:             shortKey: locale?.shortKey, 40:             percentage, &gt;&gt;&gt; 41:             gauge: (percentage &gt; 90 ? 'full' : (percentage &gt; 70 ? 'three-quarters' : (percentage &gt; 50 ? 'half' : (percentage &gt; 30 ? 'quarter' : 'empty')))) 42:             } 43:             if (!(fileName === 'en.json'    fileName === 'tlh_AA.json')) { 44:                 languages.push(lang) </pre>		
M	lib/startup/validatePreconditions.ts (Line 105)	<b>S6660</b> 'If' statement should not be the only statement in 'else' block
<p>■ <b>Problematic Code:</b></p> <pre> 102:         if (error) { 103:             reject(error) 104:         } else { &gt;&gt;&gt; 105:             if (status === 'open') { 106:                 logger.warn(`Port \${colors.bold(port.toString())} is in use (\${colors.red('NOT OK')})`) 107:                 resolve(false) 108:             } else { </pre>		
M	frontend/src/app/two-factor-auth-enter two-factor-auth-enter.component.ts (Line 61)	<b>S125</b> Remove this commented out code.

	<p>■ <b>Problematic Code:</b></p> <pre> 58:         this.cookieService.put('token', authentication.token, { expires }) 59:         sessionStorage.setItem('bid', authentication.bid?.toString()) 60:         /* Use userService to notify if user has logged in */ &gt;&gt;&gt; 61:         /* this.userService.isLoggedIn = true; */ 62:         this.userService.isLoggedIn.next(true) 63:         this.ngZone.run(async () =&gt; await this.router.navigate(['/search'])) 64:     }, </pre>	
<div>M</div>	frontend/src/app/user-details user-details.component.html (Line 18)	<b>AvoidCommentedOutCodeCheck</b> Remove this commented out code.
	<p>■ <b>Problematic Code:</b></p> <pre> 15:         &lt;strong translate="LABEL_EMAIL"&gt;&lt;/strong&gt; 16:         &lt;p&gt;{{user?.email}}&lt;/p&gt; 17:     &lt;/div&gt; &gt;&gt;&gt; 18:     &lt;!--&lt;div&gt; 19:         &lt;strong translate="LABEL_PASSWORD"&gt;&lt;/strong&gt; 20:         &lt;p&gt;{{user?.password}}&lt;/p&gt; 21:     &lt;/div&gt;--&gt; </pre>	
<div>M</div>	routes/order.ts (Line 40)	<b>S3358</b> Extract this nested ternary operation into an independent statement.
	<p>■ <b>Problematic Code:</b></p> <pre> 37:         .then(async (basket: BasketModel   null) =&gt; { 38:             if (basket != null) { 39:                 const customer = security.authenticatedUsers.from(req) &gt;&gt;&gt; 40:                 const email = customer ? customer.data ? customer.data.email : '' : '' 41:                 const orderId = security.hash(email).slice(0, 4) + '-' + utils.randomHexString(16) 42:                 const pdfFile = `order_\${orderId}.pdf` 43:                 const doc = new PDFDocument() </pre>	
<div>M</div>	frontend/src/app/navbar navbar.component.ts (Line 132)	<b>S6557</b> Use 'String#startsWith' method instead.
	<p>■ <b>Problematic Code:</b></p> <pre> 129:         if (config?.application?.logo) { 130:             let logo: string = config.application.logo 131: &gt;&gt;&gt; 132:             if (logo.substring(0, 4) === 'http') { 133:                 logo = decodeURIComponent(logo.substring(logo.lastIndexOf('/') + 1)) 134:             } 135:             this.logoSrc = 'assets/public/images/' + logo </pre>	
<div>M</div>	server.ts (Line 203)	<b>S6397</b> Replace this character class by the character itself.

<p>■ <b>Problematic Code:</b></p> <pre> 200: 201:  /* Remove duplicate slashes from URL which allowed bypassing subsequent filters */ 202:  app.use((req: Request, res: Response, next: NextFunction) =&gt; { &gt;&gt;&gt; 203:    req.url = req.url.replace(/[/]+/g, '/') 204:    next() 205:  }) 206: </pre>		
L	server.ts (Line 551)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<p>■ <b>Problematic Code:</b></p> <pre> 548:    // translate hints on-the-fly 549:    if (name === 'Hint') { 550:      resource.list.fetch.after((req: Request, res: Response, context: { instance: string   any[], continue: any }) =&gt; { &gt;&gt;&gt; 551:        for (let i = 0; i &lt; context.instance.length; i++) { 552:          context.instance[i].text = req.__(context.instance[i].text) 553:        } 554:        return context.continue </pre>		
L	frontend/src/app/change-password change-password.component.ts (Line 92)	<b>S6594</b> Use the "RegExp.exec()" method instead.
<p>■ <b>Problematic Code:</b></p> <pre> 89: 90:  changePassword () { 91:    if ( &gt;&gt;&gt; 92:      localStorage.getItem('email')?.match(/support@.*/) &amp;&amp; 93:      !this.newPasswordControl.value.match( 94:        /(?!.*[a-z])(?=.*[A-Z])(?=.*\d)(?=.*[@\$!%*?&amp;])[A-Za-z\d@\$!%*?&amp;]{12,30}/ 95:      ) </pre>		
L	frontend/src/app/search-result search-result.component.ts (Line 199)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<p>■ <b>Problematic Code:</b></p> <pre> 196:    next: (basket) =&gt; { 197:      const productsInBasket: any = basket.Products 198:      let found = false &gt;&gt;&gt; 199:      for (let i = 0; i &lt; productsInBasket.length; i++) { 200:        if (productsInBasket[i].id === id) { 201:          found = true 202:          this.basketService.get(productsInBasket[i].BasketItem.id).subscribe({ </pre>		
L	routes/deluxe.ts (Line 51)	<b>S2486</b> Handle this exception or don't catch it at all.

<p>■ <b>Problematic Code:</b></p> <pre> 48:         const updatedToken = security.authorize(userWithStatus) 49:         security.authenticatedUsers.put(updatedToken, userWithStatus) 50:         res.status(200).json({ status: 'success', data: { confirmation: 'Congratulations! You are now a deluxe member!', token: updatedToken } }) &gt;&gt;&gt; 51:         } catch (error) { 52:             res.status(400).json({ status: 'error', error: 'Something went wrong. Please try again!' }) 53:         } 54:         } catch (err: unknown) { </pre>		
L	test/server/webhookSpec.ts (Line 23)	<b>S2486</b> Handle this exception or don't catch it at all.
<p>■ <b>Problematic Code:</b></p> <pre> 20:         it('ignores errors where no webhook URL is provided via environment variable', async () =&gt; { 21:             try { 22:                 await webhook.notify(challenge) &gt;&gt;&gt; 23:             } catch (error) { 24:                 chai.assert.fail('webhook.notify should not throw an error when no webhook URL is provided') 25:             } 26:         }) </pre>		
L	routes/likeProductReviews.ts (Line 58)	<b>S2486</b> Handle this exception or don't catch it at all.
<p>■ <b>Problematic Code:</b></p> <pre> 55:         } catch (err) { 56:             res.status(500).json(err) 57:         } &gt;&gt;&gt; 58:         } catch (err) { 59:             res.status(400).json({ error: 'Wrong Params' }) 60:         } 61:     } </pre>		
L	frontend/src/app/web3-sandbox web3-sandbox.component.ts (Line 312)	<b>S2486</b> Handle this exception or don't catch it at all.
<p>■ <b>Problematic Code:</b></p> <pre> 309:         } 310:         console.log('session', this.session) 311:         this.changeDetectorRef.detectChanges() &gt;&gt;&gt; 312:         } catch (err) { 313:             console.log('An error occurred') 314:         } 315:     } </pre>		
L	frontend/src/app/password-strength password-strength.component.ts (Line 59)	<b>S6353</b> Use concise character class syntax '\d' instead of '[0-9]'.

<b>■ Problematic Code:</b> <pre> 56:   } 57: 58:   get containAtLeastOneDigit (): boolean { &gt;&gt;&gt; 59:       return /^(?=.*?[0-9])/\.test(this.password) 60:   } 61: 62:   get containAtLeastOneSpecialChar (): boolean { </pre>		
	frontend/src/main.ts (Line 9)	<b>S1128</b> Remove this unused import of 'AppModule'.
<b>■ Problematic Code:</b> <pre> 6: import { enableProdMode, importProvidersFrom } from '@angular/core' 7: import { platformBrowserDynamic } from '@angular/platform-browser-dynamic' 8: &gt;&gt;&gt; 9: import { AppModule, HttpLoaderFactory } from './app/app.module' 10: import { environment } from './environments/environment' 11: import { AppComponent } from './app/app.component'; 12: import { MatAutocompleteModule } from '@angular/material/autocomplete'; </pre>		
	frontend/src/main.ts (Line 51)	<b>S1128</b> Remove this unused import of 'TranslateHttpLoader'.
<b>■ Problematic Code:</b> <pre> 48: import { provideAnimations } from '@angular/platform-browser/animations'; 49: import { ReactiveFormsModule, FormsModule } from '@angular/forms'; 50: &gt;&gt;&gt; 51: import { TranslateHttpLoader } from '@ngx-translate/http-loader'; 52: import { TranslateModule, TranslateLoader } from '@ngx-translate/core'; 53: import { Routing } from './app/app.routing'; 54: import { BrowserModule, bootstrapApplication } from '@angular/platform-browser'; </pre>		
	lib/startup/validateDependenciesBasic.ts (Line 12)	<b>S2486</b> Handle this exception or don't catch it at all.
<b>■ Problematic Code:</b> <pre> 9:   try { 10:       // @ts-expect-error FIXME due to non-existing type definitions for check-dependencies 11:       await import('check-dependencies') &gt;&gt;&gt; 12:   } catch (err) { 13:       console.error('Please run "npm install" before starting the application!') 14:       process.exit(1) 15:   } </pre>		
	frontend/src/hacking-instructor/index.ts (Line 201)	<b>S6571</b> 'unknown' overrides all other types in this union type.

<b>■ Problematic Code:</b> <pre> 198:     } 199: 200:     // eslint-disable-next-line @typescript-eslint/no-invalid-void-type &gt;&gt;&gt; 201:     const continueConditions: Array&lt;Promise&lt;void   unknown&gt;&gt; = [ 202:         hint.resolved() 203:     ] 204: </pre>		
<b>L</b>	routes/b2bOrder.ts (Line 26)	<b>S6594</b> Use the "RegExp.exec()" method instead.
<b>■ Problematic Code:</b> <pre> 23:         vm.runInContext('safeEval(orderLinesData)', sandbox, { timeout: 2000 }) 24:         res.json({ cid: body.cid, orderNo: uniqueOrderNumber(), paymentDue: dateTwoWeeksFromNow() }) 25:     } catch (err) { &gt;&gt;&gt; 26:         if (utils.getErrorMessage(err).match(/Script execution timed out.*/) != null) { 27:             challengeUtils.solveIf(challenges.rceOccupyChallenge, () =&gt; { return true }) 28:             res.status(503) 29:             next(new Error('Sorry, we are temporarily not available! Please try again later.')) </pre>		
<b>L</b>	test/cypress/support/commands.ts (Line 36)	<b>S6594</b> Use the "RegExp.exec()" method instead.
<b>■ Problematic Code:</b> <pre> 33:     'login', 34:     (context: { email: string, password: string, totpSecret?: string }) =&gt; { 35:         cy.visit('/#/login') &gt;&gt;&gt; 36:         if (context.email.match(/\S+@\S+\.\S+/) != null) { 37:             cy.get('#email').type(context.email) 38:         } else { 39:             cy.task&lt;string&gt;('GetFromConfig', 'application.domain').then( </pre>		
<b>L</b>	lib/is-docker.ts (Line 27)	<b>S6606</b> Prefer using nullish coalescing operator (`??=`) instead of an assignment expression, as it is simpler to read.
<b>■ Problematic Code:</b> <pre> 24: 25: export default function isDocker () { 26:     // TODO: Use `??=` when targeting Node.js 16. &gt;&gt;&gt; 27:     if (isDockerCached === undefined) { 28:         isDockerCached = hasDockerEnv()    hasDockerCGroup() 29:     } 30:     return isDockerCached </pre>		
<b>L</b>	routes/chatbot.ts (Line 111)	<b>S2486</b> Handle this exception or don't catch it at all.



<b>■ Problematic Code:</b> <pre> 108:         } else { 109:             res.status(200).json(response) 110:         } &gt;&gt;&gt; 111:     } catch (err) { 112:         try { 113:             await bot.respond(testCommand, `\${user.id}`) 114:             res.status(200).json({ </pre>		
<b>L</b>	test/server/blueprintSpec.ts (Line 58)	<b>S2486</b> Handle this exception or don't catch it at all.
<b>■ Problematic Code:</b> <pre> 55:             for (const property of product.exifForBlueprintChallenge) { 56:                 expect(properties).to.include(property) 57:             } &gt;&gt;&gt; 58:         } catch (error) { 59:             expect.fail(`Could not read EXIF data from \${pathToImage}`) 60:         } 61:     } </pre>		
<b>L</b>	lib/codingChallenges.ts (Line 37)	<b>S2486</b> Handle this exception or don't catch it at all.
<b>■ Problematic Code:</b> <pre> 34:         ) { 35:             matches.push({ path: currPath, content: code }) 36:         } &gt;&gt;&gt; 37:     } catch (e) { 38:         logger.warn(`File \${currPath} could not be read. it might have been moved or deleted. If coding challenges are contained in the file, they will not be available.`) 39:     } 40: } </pre>		
<b>L</b>	lib/codingChallenges.ts (Line 59)	<b>S6594</b> Use the "RegExp.exec()" method instead.
<b>■ Problematic Code:</b> <pre> 56: } 57: 58: function getCodingChallengeFromFileContent (source: string, challengeKey: string) { &gt;&gt;&gt; 59:     const snippets = source.match(`[/#]{0,2} vuln-code-snippet start.*\${challengeKey}([^\s]*)vuln-code-snippet end.*\${challengeKey}`) 60:     if (snippets == null) { 61:         throw new BrokenBoundary('Broken code snippet boundaries for: ' + challengeKey) 62:     } </pre>		
<b>L</b>	routes/chatbot.ts (Line 71)	<b>S2486</b> Handle this exception or don't catch it at all.

**■ Problematic Code:**

```

68:         action: 'response',
69:         body: bot.greet(`${user.id}`)
70:     })
>>> 71:     } catch (err) {
72:         next(new Error('Blocked illegal activity by ' + req.socket.remoteAddress))
73:     }
74:     return

```

**L**

routes/chatbot.ts  
(Line 81)

**S2486**

Handle this exception or don't catch it at all.

**■ Problematic Code:**

```

78:     bot.addUser(`${user.id}`, username)
79:     try {
80:         bot.addUser(`${user.id}`, username)
>>> 81:     } catch (err) {
82:         next(new Error('Blocked illegal activity by ' + req.socket.remoteAddress))
83:         return
84:     }

```

**L**

routes/chatbot.ts  
(Line 199)

**S2486**

Handle this exception or don't catch it at all.

**■ Problematic Code:**

```

196:         status: bot.training.state,
197:         body: bot.training.state ? bot.greet(`${user.id}`) :
`${config.get<string>('application.chatBot.name')}` isn't ready at the moment, please wait while
I set things up`
198:     })
>>> 199:     } catch (err) {
200:         next(new Error('Blocked illegal activity by ' + req.socket.remoteAddress))
201:     }
202: }

```

**L**

routes/search.ts  
(Line 50)

**S4138**

Expected a `for-of` loop instead of a `for` loop with this simple iteration.

**■ Problematic Code:**

```

47:         void models.sequelize.query('SELECT sql FROM sqlite_master').then(([data]:
any) => {
48:             const tableDefinitions = utils.queryResultToJson(data)
49:             if (tableDefinitions.data?.length) {
>>> 50:                 for (let i = 0; i < tableDefinitions.data.length; i++) {
51:                     if (tableDefinitions.data[i].sql) {
52:                         solved = solved && utils.containsOrEscaped(dataString,
tableDefinitions.data[i].sql)
53:                     if (!solved) {

```

**L**

lib/insecurity.ts  
(Line 120)

**S6353**

Use concise character class syntax `\\d` instead of `[0-9]`.

<b>■ Problematic Code:</b> <pre> 117: } 118: 119: function hasValidFormat (coupon: string) { &gt;&gt;&gt; 120:   return coupon.match(/(JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC)[0-9]{2}-[0-9]{2}/) 121: } 122: 123: // vuln-code-snippet start redirectCryptoCurrencyChallenge redirectChallenge </pre>		
	lib/insecurity.ts (Line 120)	<b>S6353</b> Use concise character class syntax '\d' instead of '[0-9]'.
<b>■ Problematic Code:</b> <pre> 117: } 118: 119: function hasValidFormat (coupon: string) { &gt;&gt;&gt; 120:   return coupon.match(/(JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC)[0-9]{2}-[0-9]{2}/) 121: } 122: 123: // vuln-code-snippet start redirectCryptoCurrencyChallenge redirectChallenge </pre>		
	lib/insecurity.ts (Line 120)	<b>S6594</b> Use the "RegExp.exec()" method instead.
<b>■ Problematic Code:</b> <pre> 117: } 118: 119: function hasValidFormat (coupon: string) { &gt;&gt;&gt; 120:   return coupon.match(/(JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC)[0-9]{2}-[0-9]{2}/) 121: } 122: 123: // vuln-code-snippet start redirectCryptoCurrencyChallenge redirectChallenge </pre>		
	routes/basket.ts (Line 26)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<b>■ Problematic Code:</b> <pre> 23:         return user &amp;&amp; id &amp;&amp; id !== 'undefined' &amp;&amp; id !== 'null' &amp;&amp; id !== 'NaN' &amp;&amp; user.bid &amp;&amp; user?.bid !== parseInt(id, 10) // eslint-disable-line eqeqeq 24:     }) 25:     if (((basket?.Products) !== null) &amp;&amp; basket.Products.length &gt; 0) { &gt;&gt;&gt; 26:         for (let i = 0; i &lt; basket.Products.length; i++) { 27:             basket.Products[i].name = req.__(basket.Products[i].name) 28:         } 29:     } </pre>		
	routes/payment.ts (Line 9)	<b>S101</b> Rename interface "displayCard" to match the regular expression ^[A-Z][a-zA-Z0-9]*\$.

<b>■ Problematic Code:</b> <pre> 6: import { type Request, type Response, type NextFunction } from 'express' 7: import { CardModel } from '../models/card' 8: &gt;&gt;&gt; 9: interface displayCard { 10:   UserId: number 11:   id: number 12:   fullName: string </pre>		
L	server.ts (Line 218)	<b>S1874</b> The signature '(from: number, length?: number   undefined): string' of 'locale.key.substr' is deprecated.
<b>■ Problematic Code:</b> <pre> 215:   contact: config.get('application.securityTxt.contact'), 216:   encryption: config.get('application.securityTxt.encryption'), 217:   acknowledgements: config.get('application.securityTxt.acknowledgements'), &gt;&gt;&gt; 218:   'Preferred-Languages': [...new Set(locales.map((locale: { key: string }) =&gt; locale.key.substr(0, 2)))]join(', '), 219:   hiring: config.get('application.securityTxt.hiring'), 220:   csaf: config.get&lt;string&gt;('server.baseUrl') + config.get&lt;string&gt;('application.securityTxt.csaf'), 221:   expires: securityTxtExpiration.toUTCString() </pre>		
L	frontend/src/app/search-result search-result.component.ts (Line 134)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<b>■ Problematic Code:</b> <pre> 131:   } 132: 133:   trustProductDescription (tableData: any[]) { // vuln-code-snippet neutral-line restfulXssChallenge &gt;&gt;&gt; 134:   for (let i = 0; i &lt; tableData.length; i++) { // vuln-code-snippet neutral-line restfulXssChallenge 135:     tableData[i].description = this.sanitizer.bypassSecurityTrustHtml(tableData[i].description) // vuln-code-snippet vuln-line restfulXssChallenge 136:   } // vuln-code-snippet neutral-line restfulXssChallenge 137:   } // vuln-code-snippet neutral-line restfulXssChallenge </pre>		
L	data/static/codefixes dbSchemaChallenge_1.ts (Line 8)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<b>■ Problematic Code:</b> <pre> 5:   models.sequelize.query("SELECT * FROM Products WHERE ((name LIKE '%"+criteria+"%' OR description LIKE '%"+criteria+"%') AND deletedAt IS NULL) ORDER BY name") 6:   .then(([products]: any) =&gt; { 7:     const dataString = JSON.stringify(products) &gt;&gt;&gt; 8:     for (let i = 0; i &lt; products.length; i++) { 9:       products[i].name = req.__(products[i].name) 10:      products[i].description = req.__(products[i].description) 11:    } </pre>		

<div>L</div>	data/static/codefixes dbSchemaChallenge_2_correct.ts (Line 10)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 7:         { replacements: { criteria } } 8:     ).then(([products]: any) =&gt; { 9:         const dataString = JSON.stringify(products) &gt;&gt;&gt; 10:         for (let i = 0; i &lt; products.length; i++) { 11:             products[i].name = req.__(products[i].name) 12:             products[i].description = req.__(products[i].description) 13:         } </pre> </div>		
<div>L</div>	data/static/codefixes dbSchemaChallenge_3.ts (Line 14)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 11:     models.sequelize.query(`SELECT * FROM Products WHERE ((name LIKE '%\${criteria}%' OR description LIKE '%\${criteria}%') AND deletedAt IS NULL) ORDER BY name`) 12:     .then(([products]: any) =&gt; { 13:         const dataString = JSON.stringify(products) &gt;&gt;&gt; 14:         for (let i = 0; i &lt; products.length; i++) { 15:             products[i].name = req.__(products[i].name) 16:             products[i].description = req.__(products[i].description) 17:         } </pre> </div>		
<div>L</div>	data/static/codefixes unionSqlInjectionChallenge_1.ts (Line 9)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 6:     models.sequelize.query(`SELECT * FROM Products WHERE ((name LIKE '%\${criteria}%' OR description LIKE '%\${criteria}%') AND deletedAt IS NULL) ORDER BY name`) 7:     .then(([products]: any) =&gt; { 8:         const dataString = JSON.stringify(products) &gt;&gt;&gt; 9:         for (let i = 0; i &lt; products.length; i++) { 10:             products[i].name = req.__(products[i].name) 11:             products[i].description = req.__(products[i].description) 12:         } </pre> </div>		
<div>L</div>	data/static/codefixes unionSqlInjectionChallenge_2_correct.ts (Line 10)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 7:         { replacements: { criteria } } 8:     ).then(([products]: any) =&gt; { 9:         const dataString = JSON.stringify(products) &gt;&gt;&gt; 10:         for (let i = 0; i &lt; products.length; i++) { 11:             products[i].name = req.__(products[i].name) 12:             products[i].description = req.__(products[i].description) 13:         } </pre> </div>		

<div>L</div>	data/static/codefixes unionSqlInjectionChallenge_3.ts (Line 13)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 10:     models.sequelize.query(`SELECT * FROM Products WHERE ((name LIKE '%\${criteria}%' OR description LIKE '%\${criteria}%') AND deletedAt IS NULL) ORDER BY name`) 11:     .then(([products]: any) =&gt; { 12:         const dataString = JSON.stringify(products) &gt;&gt;&gt; 13:         for (let i = 0; i &lt; products.length; i++) { 14:             products[i].name = req.__(products[i].name) 15:             products[i].description = req.__(products[i].description) 16:         } </pre> </div>		
<div>L</div>	routes/vulnCodeFixes.ts (Line 11)	<b>S101</b> Rename interface "codeFix" to match the regular expression <code>^[A-Z][a-zA-Z0-9]*\$</code> .
<div> <div>■ Problematic Code:</div> <pre> 8: 9: const FixesDir = 'data/static/codefixes' 10: &gt;&gt;&gt; 11: interface codeFix { 12:     fixes: string[] 13:     correct: number 14: } </pre> </div>		
<div>L</div>	frontend/src/app/Services code-fixes.service.ts (Line 7)	<b>S101</b> Rename interface "result" to match the regular expression <code>^[A-Z][a-zA-Z0-9]*\$</code> .
<div> <div>■ Problematic Code:</div> <pre> 4: import { catchError, map } from 'rxjs/operators' 5: import { type Observable } from 'rxjs' 6: &gt;&gt;&gt; 7: export interface result { 8:     verdict: boolean 9: } 10: </pre> </div>		
<div>L</div>	frontend/src/app/Services vuln-lines.service.ts (Line 6)	<b>S101</b> Rename interface "result" to match the regular expression <code>^[A-Z][a-zA-Z0-9]*\$</code> .
<div> <div>■ Problematic Code:</div> <pre> 3: import { HttpClient } from '@angular/common/http' 4: import { catchError, map } from 'rxjs/operators' 5: &gt;&gt;&gt; 6: export interface result { 7:     verdict: boolean 8:     hint: string 9: } </pre> </div>		

L	routes/vulnCodeSnippet.ts (Line 26)	<b>S1301</b> Replace this "switch" statement by "if" statements to increase readability.
<b>Problematic Code:</b> <pre> 23: } 24: 25: const setStatusCode = (error: any) =&gt; { &gt;&gt;&gt; 26:   switch (error.name) { 27:     case 'BrokenBoundary': 28:       return 422 29:     default: </pre>		
L	routes/verify.ts (Line 133)	<b>S6594</b> Use the "RegExp.exec()" method instead.
<b>Problematic Code:</b> <pre> 130: } 131: 132: function hasEmail (token: { data: { email: string } }, email: string   RegExp) { &gt;&gt;&gt; 133:   return token?.data?.email?.match(email) 134: } 135: 136: export const databaseRelatedChallenges = () =&gt; (req: Request, res: Response, next: NextFunction) =&gt; { </pre>		
L	lib/startup/validatePreconditions.ts (Line 118)	<b>S1874</b> The signature '(from: number, length?: number   undefined): string' of 'pathRelativeToProjectRoot.substr' is deprecated.
<b>Problematic Code:</b> <pre> 115: } 116: 117: export const checkIfRequiredFileExists = async (pathRelativeToProjectRoot: string) =&gt; { &gt;&gt;&gt; 118:   const fileName = pathRelativeToProjectRoot.substr(pathRelativeToProjectRoot.lastIndexOf('/') + 1) 119: 120:   return await access(path.resolve(pathRelativeToProjectRoot)).then(() =&gt; { 121:     logger.info(`Required file \${colors.bold(fileName)} is present (\${colors.green('OK')})`) </pre>		
L	frontend/src/app/data-export data-export.component.ts (Line 69)	<b>S1874</b> '(...text: string[]): void' is deprecated.
<b>Problematic Code:</b> <pre> 66:     this.error = null 67:     this.confirmation = data.confirmation 68:     this.userData = data.userData &gt;&gt;&gt; 69:     window.open('', '_blank', 'width=500').document.write(this.userData) 70:     this.lastSuccessfulTry = new Date() 71:     localStorage.setItem('lstdtxpirt', JSON.stringify(this.lastSuccessfulTry)) 72:     this.ngOnInit() </pre>		

<div>L</div>	routes/basketItems.ts (Line 26)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 23:     const basketIds = [] 24:     const quantities = [] 25: &gt;&gt;&gt; 26:     for (let i = 0; i &lt; result.length; i++) { 27:         if (result[i].key === 'ProductId') { 28:             productIds.push(result[i].value) 29:         } else if (result[i].key === 'BasketId') { </pre> </div>		
<div>L</div>	routes/showProductReviews.ts (Line 40)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 37:     const t1 = new Date().getTime() 38:     challengeUtils.solveIf(challenges.noSqlCommandChallenge, () =&gt; { return (t1 - t0) &gt; 2000 }) 39:     const user = security.authenticatedUsers.from(req) &gt;&gt;&gt; 40:     for (let i = 0; i &lt; reviews.length; i++) { 41:         if (user === undefined    reviews[i].likedBy.includes(user.data.email)) { 42:             reviews[i].liked = true 43:         } </pre> </div>		
<div>L</div>	frontend/src/app/oauth oauth.component.ts (Line 69)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 66:     const hash = this.route.snapshot.data.params.substr(1) 67:     const splitted = hash.split('&amp;') 68:     const params: any = {} &gt;&gt;&gt; 69:     for (let i = 0; i &lt; splitted.length; i++) { 70:         const param: string = splitted[i].split('=') 71:         const key: string = param[0] 72:         params[key] = param[1] </pre> </div>		
<div>L</div>	routes/resetPassword.ts (Line 66)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 63:     challengeUtils.solveIf(challenges.geoStalkingMetaChallenge, () =&gt; { 64:         const securityAnswer = (() =&gt; { 65:             const memories = config.get&lt;MemoryConfig[]&gt;('memories') &gt;&gt;&gt; 66:             for (let i = 0; i &lt; memories.length; i++) { 67:                 if (memories[i].geoStalkingMetaSecurityAnswer) { 68:                     return memories[i].geoStalkingMetaSecurityAnswer 69:                 } </pre> </div>		



<div>L</div>	routes/resetPassword.ts (Line 77)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 74:   challengeUtils.solveIf(challenges.geoStalkingVisualChallenge, () =&gt; { 75:     const securityAnswer = (() =&gt; { 76:       const memories = config.get&lt;MemoryConfig[]&gt;('memories') &gt;&gt;&gt; 77:       for (let i = 0; i &lt; memories.length; i++) { 78:         if (memories[i].geoStalkingVisualSecurityAnswer) { 79:           return memories[i].geoStalkingVisualSecurityAnswer 80:         } </pre> </div>		
<div>L</div>	test/api/metricsApiSpec.ts (Line 18)	<b>S6353</b> Use concise character class syntax `\\d` instead of `[0-9]`.
<div> <div>■ Problematic Code:</div> <pre> 15:   return frisby.get(API_URL) 16:     .expect('status', 200) 17:     .expect('header', 'content-type', /text\\/plain/) &gt;&gt;&gt; 18:     .expect('bodyContains', /^.*_version_info{version="[0-9]+.[0-9]+.[0-9]+(-SNAPSHO T)?",major="[0-9]+",minor="[0-9]+",patch="[0-9]+",app=".*"} 1\$/gm) 19:     .expect('bodyContains', /^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*\$/gm) 20:     .expect('bodyContains', /^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*\$/gm) 21:     .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9.]*\$/gm) </pre> </div>		
<div>L</div>	test/api/metricsApiSpec.ts (Line 18)	<b>S6353</b> Use concise character class syntax `\\d` instead of `[0-9]`.
<div> <div>■ Problematic Code:</div> <pre> 15:   return frisby.get(API_URL) 16:     .expect('status', 200) 17:     .expect('header', 'content-type', /text\\/plain/) &gt;&gt;&gt; 18:     .expect('bodyContains', /^.*_version_info{version="[0-9]+.[0-9]+.[0-9]+(-SNAPSHO T)?",major="[0-9]+",minor="[0-9]+",patch="[0-9]+",app=".*"} 1\$/gm) 19:     .expect('bodyContains', /^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*\$/gm) 20:     .expect('bodyContains', /^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*\$/gm) 21:     .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9.]*\$/gm) </pre> </div>		
<div>L</div>	test/api/metricsApiSpec.ts (Line 18)	<b>S6353</b> Use concise character class syntax `\\d` instead of `[0-9]`.

#### ■ Problematic Code:

```

15:     return frisby.get(API_URL)
16:     .expect('status', 200)
17:     .expect('header', 'content-type', /text\/plain/)
>>> 18:     .expect('bodyContains', /^.*_version_info{version="[0-9]+\.[0-9]+\.[0-9]+(-SNAPSHO
T)?",major="[0-9]+",minor="[0-9]+",patch="[0-9]+",app=".*"} 1$/gm)
19:     .expect('bodyContains',
/^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
20:     .expect('bodyContains',
/^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
21:     .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9.]*$/gm)

```

L

test/api/metricsApiSpec.ts  
(Line 18)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

15:     return frisby.get(API_URL)
16:     .expect('status', 200)
17:     .expect('header', 'content-type', /text\/plain/)
>>> 18:     .expect('bodyContains', /^.*_version_info{version="[0-9]+\.[0-9]+\.[0-9]+(-SNAPSHO
T)?",major="[0-9]+",minor="[0-9]+",patch="[0-9]+",app=".*"} 1$/gm)
19:     .expect('bodyContains',
/^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
20:     .expect('bodyContains',
/^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
21:     .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9.]*$/gm)

```

L

test/api/metricsApiSpec.ts  
(Line 18)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

15:     return frisby.get(API_URL)
16:     .expect('status', 200)
17:     .expect('header', 'content-type', /text\/plain/)
>>> 18:     .expect('bodyContains', /^.*_version_info{version="[0-9]+\.[0-9]+\.[0-9]+(-SNAPSHO
T)?",major="[0-9]+",minor="[0-9]+",patch="[0-9]+",app=".*"} 1$/gm)
19:     .expect('bodyContains',
/^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
20:     .expect('bodyContains',
/^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
21:     .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9.]*$/gm)

```

L

test/api/metricsApiSpec.ts  
(Line 18)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

15:     return frisby.get(API_URL)
16:     .expect('status', 200)
17:     .expect('header', 'content-type', /text\/plain/)
>>> 18:     .expect('bodyContains', /^.*_version_info{version="[0-9]+\.[0-9]+\.[0-9]+(-SNAPSHOT)?",major="[0-9]+",minor="[0-9]+",patch="[0-9]+",app=".*"} 1$/gm)
19:     .expect('bodyContains',
/^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
20:     .expect('bodyContains',
/^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
21:     .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9]*$/gm)

```

L

test/api/metricsApiSpec.ts  
(Line 19)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

16:     .expect('status', 200)
17:     .expect('header', 'content-type', /text\/plain/)
18:     .expect('bodyContains', /^.*_version_info{version="[0-9]+\.[0-9]+\.[0-9]+(-SNAPSHOT)?",major="[0-9]+",minor="[0-9]+",patch="[0-9]+",app=".*"} 1$/gm)
>>> 19:     .expect('bodyContains',
/^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
20:     .expect('bodyContains',
/^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
21:     .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9]*$/gm)
22:     .expect('bodyContains', /^.*_orders_placed_total{app=".*"} [0-9]*$/gm)

```

L

test/api/metricsApiSpec.ts  
(Line 20)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

17:     .expect('header', 'content-type', /text\/plain/)
18:     .expect('bodyContains', /^.*_version_info{version="[0-9]+\.[0-9]+\.[0-9]+(-SNAPSHOT)?",major="[0-9]+",minor="[0-9]+",patch="[0-9]+",app=".*"} 1$/gm)
19:     .expect('bodyContains',
/^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
>>> 20:     .expect('bodyContains',
/^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
21:     .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9]*$/gm)
22:     .expect('bodyContains', /^.*_orders_placed_total{app=".*"} [0-9]*$/gm)
23:     .expect('bodyContains', /^.*_users_registered{type="standard",app=".*"}
[0-9]*$/gm)

```

L

test/server  
challengeTutorialSequenceSpec.ts  
(Line 34)

**S6653**

Use 'Object.hasOwnProperty()' instead of  
'Object.prototype.hasOwnProperty.call()'.

#### ■ Problematic Code:

```

31:     for (const { tutorial } of challenges) {
32:         if (tutorial) {
33:             const order: string = tutorial.order
>>> 34:             if (!Object.prototype.hasOwnProperty.call(tutorialOrderCounts, order)) {
35:                 tutorialOrderCounts[order] = 0
36:             }
37:             tutorialOrderCounts[order]++

```

L	test/api/metricsApiSpec.ts (Line 61)	<b>S6353</b> Use concise character class syntax '\d' instead of '[0-9]'.
<b>■ Problematic Code:</b>		
<pre> 58:         return frisby.get(API_URL) 59:         .expect('status', 200) 60:         .expect('header', 'content-type', /text\/plain/) &gt;&gt;&gt; 61:         .expect('bodyContains', /^file_upload_errors{file_type=".*",app=".*"} [0-9]*\$/gm) 62:         }) 63:     }) 64: }) </pre>		
L	test/api/metricsApiSpec.ts (Line 45)	<b>S6353</b> Use concise character class syntax '\d' instead of '[0-9]'.
<b>■ Problematic Code:</b>		
<pre> 42:         return frisby.get(API_URL) 43:         .expect('status', 200) 44:         .expect('header', 'content-type', /text\/plain/) &gt;&gt;&gt; 45:         .expect('bodyContains', /^file_uploads_count{file_type=".*",app=".*"} [0-9]*\$/gm) 46:         }) 47:     }) 48: </pre>		
L	test/api/metricsApiSpec.ts (Line 30)	<b>S6353</b> Use concise character class syntax '\d' instead of '[0-9]'.
<b>■ Problematic Code:</b>		
<pre> 27:         .expect('bodyContains', /^.*_user_social_interactions{type="review",app=".*"} [0-9]*\$/gm) 28:         .expect('bodyContains', /^.*_user_social_interactions{type="feedback",app=".*"} [0-9]*\$/gm) 29:         .expect('bodyContains', /^.*_user_social_interactions{type="complaint",app=".*"} [0-9]*\$/gm) &gt;&gt;&gt; 30:         .expect('bodyContains', /^http_requests_count{status_code="[0-9]XX",app=".*"} [0-9]*\$/gm) 31:     }) 32: 33:     xit('GET file upload metrics via public API', () =&gt; { // FIXME Flaky on CI/CD on at least Windows </pre>		
L	test/api/metricsApiSpec.ts (Line 30)	<b>S6353</b> Use concise character class syntax '\d' instead of '[0-9]'.

<p>■ <b>Problematic Code:</b></p> <pre> 27:         .expect('bodyContains', /^.*_user_social_interactions{type="review",app=".*"} [0-9]*\$/gm) 28:         .expect('bodyContains', /^.*_user_social_interactions{type="feedback",app=".*"} [0-9]*\$/gm) 29:         .expect('bodyContains', /^.*_user_social_interactions{type="complaint",app=".*"} [0-9]*\$/gm) &gt;&gt;&gt; 30:         .expect('bodyContains', /^http_requests_count{status_code="[0-9]XX",app=".*"} [0-9]*\$/gm) 31:     }) 32: 33:     xit('GET file upload metrics via public API', () =&gt; { // FIXME Flaky on CI/CD on at least Windows </pre>	
<p><b>L</b></p> <p>test/api/metricsApiSpec.ts (Line 27)</p>	<p><b>S6353</b> Use concise character class syntax '\d' instead of '[0-9]'.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 24:         .expect('bodyContains', /^.*_users_registered{type="deluxe",app=".*"} [0-9]*\$/gm) 25:         .expect('bodyContains', /^.*_users_registered_total{app=".*"} [0-9]*\$/gm) 26:         .expect('bodyContains', /^.*_wallet_balance_total{app=".*"} [0-9]*\$/gm) &gt;&gt;&gt; 27:         .expect('bodyContains', /^.*_user_social_interactions{type="review",app=".*"} [0-9]*\$/gm) 28:         .expect('bodyContains', /^.*_user_social_interactions{type="feedback",app=".*"} [0-9]*\$/gm) 29:         .expect('bodyContains', /^.*_user_social_interactions{type="complaint",app=".*"} [0-9]*\$/gm) 30:         .expect('bodyContains', /^http_requests_count{status_code="[0-9]XX",app=".*"} [0-9]*\$/gm) </pre>	
<p><b>L</b></p> <p>test/api/metricsApiSpec.ts (Line 28)</p>	<p><b>S6353</b> Use concise character class syntax '\d' instead of '[0-9]'.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 25:         .expect('bodyContains', /^.*_users_registered_total{app=".*"} [0-9]*\$/gm) 26:         .expect('bodyContains', /^.*_wallet_balance_total{app=".*"} [0-9]*\$/gm) 27:         .expect('bodyContains', /^.*_user_social_interactions{type="review",app=".*"} [0-9]*\$/gm) &gt;&gt;&gt; 28:         .expect('bodyContains', /^.*_user_social_interactions{type="feedback",app=".*"} [0-9]*\$/gm) 29:         .expect('bodyContains', /^.*_user_social_interactions{type="complaint",app=".*"} [0-9]*\$/gm) 30:         .expect('bodyContains', /^http_requests_count{status_code="[0-9]XX",app=".*"} [0-9]*\$/gm) 31:     }) </pre>	
<p><b>L</b></p> <p>test/api/metricsApiSpec.ts (Line 29)</p>	<p><b>S6353</b> Use concise character class syntax '\d' instead of '[0-9]'.</p>

#### ■ Problematic Code:

```

26:         .expect('bodyContains', /^.*_wallet_balance_total{app=".*"} [0-9]*$/gm)
27:         .expect('bodyContains', /^.*_user_social_interactions{type="review",app=".*"}
[0-9]*$/gm)
28:         .expect('bodyContains', /^.*_user_social_interactions{type="feedback",app=".*"}
[0-9]*$/gm)
>>> 29:         .expect('bodyContains', /^.*_user_social_interactions{type="complaint",app=".*"}
[0-9]*$/gm)
30:         .expect('bodyContains', /^http_requests_count{status_code="[0-9]XX",app=".*"}
[0-9]*$/gm)
31:     })
32:

```

L

test/api/metricsApiSpec.ts  
(Line 22)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

19:         .expect('bodyContains',
/^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
20:         .expect('bodyContains',
/^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
21:         .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9.]*$/gm)
>>> 22:         .expect('bodyContains', /^.*_orders_placed_total{app=".*"} [0-9]*$/gm)
23:         .expect('bodyContains', /^.*_users_registered{type="standard",app=".*"}
[0-9]*$/gm)
24:         .expect('bodyContains', /^.*_users_registered{type="deluxe",app=".*"}
[0-9]*$/gm)
25:         .expect('bodyContains', /^.*_users_registered_total{app=".*"} [0-9]*$/gm)

```

L

test/api/metricsApiSpec.ts  
(Line 23)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

20:         .expect('bodyContains',
/^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*$/gm)
21:         .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9.]*$/gm)
22:         .expect('bodyContains', /^.*_orders_placed_total{app=".*"} [0-9]*$/gm)
>>> 23:         .expect('bodyContains', /^.*_users_registered{type="standard",app=".*"}
[0-9]*$/gm)
24:         .expect('bodyContains', /^.*_users_registered{type="deluxe",app=".*"}
[0-9]*$/gm)
25:         .expect('bodyContains', /^.*_users_registered_total{app=".*"} [0-9]*$/gm)
26:         .expect('bodyContains', /^.*_wallet_balance_total{app=".*"} [0-9]*$/gm)

```

L

test/api/metricsApiSpec.ts  
(Line 24)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

21:         .expect('bodyContains', /^.*_cheat_score{app=".*" } [0-9.]*$/gm)
22:         .expect('bodyContains', /^.*_orders_placed_total{app=".*" } [0-9]*$/gm)
23:         .expect('bodyContains', /^.*_users_registered{type="standard",app=".*" }
[0-9]*$/gm)
>>> 24:         .expect('bodyContains', /^.*_users_registered{type="deluxe",app=".*" }
[0-9]*$/gm)
25:         .expect('bodyContains', /^.*_users_registered_total{app=".*" } [0-9]*$/gm)
26:         .expect('bodyContains', /^.*_wallet_balance_total{app=".*" } [0-9]*$/gm)
27:         .expect('bodyContains', /^.*_user_social_interactions{type="review",app=".*" }
[0-9]*$/gm)

```

L

test/api/metricsApiSpec.ts  
(Line 25)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

22:         .expect('bodyContains', /^.*_orders_placed_total{app=".*" } [0-9]*$/gm)
23:         .expect('bodyContains', /^.*_users_registered{type="standard",app=".*" }
[0-9]*$/gm)
24:         .expect('bodyContains', /^.*_users_registered{type="deluxe",app=".*" }
[0-9]*$/gm)
>>> 25:         .expect('bodyContains', /^.*_users_registered_total{app=".*" } [0-9]*$/gm)
26:         .expect('bodyContains', /^.*_wallet_balance_total{app=".*" } [0-9]*$/gm)
27:         .expect('bodyContains', /^.*_user_social_interactions{type="review",app=".*" }
[0-9]*$/gm)
28:         .expect('bodyContains', /^.*_user_social_interactions{type="feedback",app=".*" }
[0-9]*$/gm)

```

L

test/api/metricsApiSpec.ts  
(Line 26)

**S6353**

Use concise character class syntax '\d' instead of '[0-9]'.

#### ■ Problematic Code:

```

23:         .expect('bodyContains', /^.*_users_registered{type="standard",app=".*" }
[0-9]*$/gm)
24:         .expect('bodyContains', /^.*_users_registered{type="deluxe",app=".*" }
[0-9]*$/gm)
25:         .expect('bodyContains', /^.*_users_registered_total{app=".*" } [0-9]*$/gm)
>>> 26:         .expect('bodyContains', /^.*_wallet_balance_total{app=".*" } [0-9]*$/gm)
27:         .expect('bodyContains', /^.*_user_social_interactions{type="review",app=".*" }
[0-9]*$/gm)
28:         .expect('bodyContains', /^.*_user_social_interactions{type="feedback",app=".*" }
[0-9]*$/gm)
29:         .expect('bodyContains', /^.*_user_social_interactions{type="complaint",app=".*" }
[0-9]*$/gm)

```

L

routes/search.ts  
(Line 31)

**S4138**

Expected a `for-of` loop instead of a `for` loop with this simple iteration.

#### ■ Problematic Code:

```

28:         UserModel.findAll().then(data => {
29:             const users = utils.queryResultToJson(data)
30:             if (users.data?.length) {
>>> 31:                 for (let i = 0; i < users.data.length; i++) {
32:                     solved = solved && utils.containsOrEscaped(dataString,
users.data[i].email) && utils.contains(dataString, users.data[i].password)
33:                     if (!solved) {
34:                         break

```

L

server.ts  
(Line 516)

**S4138**

Expected a `for-of` loop instead of a `for` loop with this simple iteration.

#### ■ Problematic Code:

```

513:         // translate challenge descriptions on-the-fly
514:         if (name === 'Challenge') {
515:             resource.list.fetch.after((req: Request, res: Response, context: { instance:
string | any[], continue: any }) => {
>>> 516:                 for (let i = 0; i < context.instance.length; i++) {
517:                     let description = context.instance[i].description
518:                     if (utils.contains(description, '<em>(This challenge is <strong>')) {
519:                         const warning = description.substring(description.indexOf(' <em>(This
challenge is <strong>'))

```

L

lib/startup/validateConfig.ts  
(Line 62)

**S1874**

The signature '(from: number, length?: number | undefined): string' of 'message.substr' is deprecated.

#### ■ Problematic Code:

```

59:     if (schemaErrors.length !== 0) {
60:         logger.warn(`Config schema validation failed with ${schemaErrors.length} errors
(${colors.red('NOT OK')})`)
61:         schemaErrors.forEach(({ path, message }: { path: string, message: string }) => {
>>> 62:             logger.warn(`${path}:${colors.red(message.substr(message.indexOf(path) +
path.length))}`)
63:         })
64:         success = false
65:     }

```

L

routes/search.ts  
(Line 64)

**S4138**

Expected a `for-of` loop instead of a `for` loop with this simple iteration.

#### ■ Problematic Code:

```

61:         }
62:     })
63: } // vuln-code-snippet hide-end
>>> 64:     for (let i = 0; i < products.length; i++) {
65:         products[i].name = req.__(products[i].name)
66:         products[i].description = req.__(products[i].description)
67:     }

```



<div>L</div>	server.ts (Line 537)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 534:    // translate security questions on-the-fly 535:    if (name === 'SecurityQuestion') { 536:        resource.list.fetch.after((req: Request, res: Response, context: { instance: string   any[], continue: any }) =&gt; { &gt;&gt;&gt; 537:            for (let i = 0; i &lt; context.instance.length; i++) { 538:                context.instance[i].question = req.__(context.instance[i].question) 539:            } 540:            return context.continue </pre> </div>		
<div>L</div>	server.ts (Line 565)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 562:    // translate product names and descriptions on-the-fly 563:    if (name === 'Product') { 564:        resource.list.fetch.after((req: Request, res: Response, context: { instance: any[], continue: any }) =&gt; { &gt;&gt;&gt; 565:            for (let i = 0; i &lt; context.instance.length; i++) { 566:                context.instance[i].name = req.__(context.instance[i].name) 567:                context.instance[i].description = req.__(context.instance[i].description) 568:            } </pre> </div>		
<div>L</div>	routes/currentUser.ts (Line 18)	<b>S2486</b> Handle this exception or don't catch it at all.
<div> <div>■ Problematic Code:</div> <pre> 15:        if (security.verify(req.cookies.token)) { 16:            user = security.authenticatedUsers.get(req.cookies.token) 17:        } &gt;&gt;&gt; 18:    } catch (err) { 19:        user = undefined 20:    } finally { 21:        const response = { user: { id: (user?.data ? user.data.id : undefined), email: (user?.data ? user.data.email : undefined), lastLoginIp: (user?.data ? user.data.lastLoginIp : undefined), profileImage: (user?.data ? user.data.profileImage : undefined) } } </pre> </div>		
<div>L</div>	frontend/src/app/photo-wall mime-type.validator.ts (Line 23)	<b>S4138</b> Expected a `for-of` loop instead of a `for` loop with this simple iteration.
<div> <div>■ Problematic Code:</div> <pre> 20:        const arr = new Uint8Array(fileReader.result as ArrayBuffer).subarray(0, 4) 21:        let header = '' 22:        let isValid = false &gt;&gt;&gt; 23:        for (let i = 0; i &lt; arr.length; i++) { 24:            header += arr[i].toString(16) 25:        } 26:        switch (header) { </pre> </div>		

<div>L</div>	routes/languages.ts (Line 63)	<b>S6653</b> Use 'Object.hasOwn()' instead of 'Object.prototype.hasOwnProperty.call()'.
<div> <div>■ Problematic Code:</div> <pre> 60:         return await new Promise((resolve, reject) =&gt; { 61:             try { 62:                 for (const key in fileContent) { &gt;&gt;&gt; 63:                     if (Object.prototype.hasOwnProperty.call(fileContent, key) &amp;&amp; fileContent[key] !== enContent[key]) { 64:                         differentStrings++ 65:                     } 66:                 } </pre> </div>		
<div>L</div>	test/server challengeCountryMappingSpec.ts (Line 41)	<b>S6653</b> Use 'Object.hasOwn()' instead of 'Object.prototype.hasOwnProperty.call()'.
<div> <div>■ Problematic Code:</div> <pre> 38:         for (const key of Object.keys(countryMapping)) { 39:             const { code } = countryMapping[key] 40: &gt;&gt;&gt; 41:             if (!Object.prototype.hasOwnProperty.call(countryCodeCounts, code)) { 42:                 countryCodeCounts[code] = 0 43:             } 44:             countryCodeCounts[code]++ </pre> </div>		
<div>L</div>	frontend/src/app/search-result search-result.component.html (Line 40)	<b>S6842</b> Non-interactive elements should not be assigned interactive roles.
<div> <div>■ Problematic Code:</div> <pre> 37:             } 38:             &lt;div class="product" (click)="showDetail(item)" aria-label="Click for more information about the product" 39:                 matTooltip="Click for more information" matTooltipPosition="above"&gt; &gt;&gt;&gt; 40:                 &lt;img mat-card-image [src]='\"assets/public/images/products/' + item.image\" alt={{item.name}} 41:                     class="img-responsive img-thumbnail" role="button"&gt; 42:                 &lt;div class="info-box"&gt; 43:                     &lt;div class="item-name"&gt;{{item.name}}&lt;/div&gt; </pre> </div>		
<div>L</div>	routes/countryMapping.ts (Line 19)	<b>S2486</b> Handle this exception or don't catch it at all.
<div> <div>■ Problematic Code:</div> <pre> 16:         } else { 17:             res.send(countryMapping) 18:         } &gt;&gt;&gt; 19:     } catch (err) { 20:         logger.warn('Country mapping was requested but was not found in the selected config file. Take a look at the fbctf.yml config file to find out how to configure the country mappings required by FBCTF.') 21:         res.status(500).send() 22:     } </pre> </div>		





<div>L</div>	routes/2fa.ts (Line 173)	<b>S2486</b> Handle this exception or don't catch it at all.
<div> <div>■ Problematic Code:</div> <pre> 170:     security.authenticatedUsers.updateFrom(req, utils.queryResultToJson(userModel)) 171: 172:     res.status(200).send() &gt;&gt;&gt; 173:   } catch (error) { 174:     res.status(401).send() 175:   } 176: }</pre> </div>		
<div>L</div>	routes/2fa.ts (Line 89)	<b>S2486</b> Handle this exception or don't catch it at all.
<div> <div>■ Problematic Code:</div> <pre> 86:         setup: true 87:       }) 88:     } &gt;&gt;&gt; 89:   } catch (error) { 90:     res.status(401).send() 91:   } 92: }</pre> </div>		
<div>L</div>	routes/2fa.ts (Line 140)	<b>S2486</b> Handle this exception or don't catch it at all.
<div> <div>■ Problematic Code:</div> <pre> 137:     security.authenticatedUsers.updateFrom(req, utils.queryResultToJson(userModel)) 138: 139:     res.status(200).send() &gt;&gt;&gt; 140:   } catch (error) { 141:     res.status(401).send() 142:   } 143: }</pre> </div>		
<div>L</div>	lib/utils.ts (Line 213)	<b>S1874</b> The signature '(from: number, length?: number   undefined): string' of 'ipv6.substr' is deprecated.
<div> <div>■ Problematic Code:</div> <pre> 210: 211: export const toSimpleIpAddress = (ipv6: string) =&gt; { 212:   if (startsWith(ipv6, '::ffff:')) { &gt;&gt;&gt; 213:     return ipv6.substr(7) 214:   } else if (ipv6 === ':::1') { 215:     return '127.0.0.1' 216:   } else {</pre> </div>		
<div>L</div>	routes/2fa.ts (Line 54)	<b>S2486</b> Handle this exception or don't catch it at all.

<p>■ <b>Problematic Code:</b></p> <pre> 51:     security.authenticatedUsers.put(token, plainUser) 52: 53:     res.json({ authentication: { token, bid: basket.id, uemail: user.email } }) &gt;&gt;&gt; 54:   } catch (error) { 55:     res.status(401).send() 56:   } 57: }</pre>		
L	frontend/src/app/Services form-submit.service.ts (Line 22)	<b>S1874</b> 'keyCode' is deprecated.
<p>■ <b>Problematic Code:</b></p> <pre> 19:     form.addEventListener('keyup', function (event) { 20:       event.preventDefault() 21:       // eslint-disable-next-line import/no-deprecated &gt;&gt;&gt; 22:       if (event.keyCode === 13 &amp;&amp; !submitButton.disabled) { 23:         onSubmit() 24:       } 25:     })</pre>		
L	frontend/src/app/token-sale token-sale.component.html (Line 96)	<b>S6850</b> Headings must have content and the content must be accessible by a screen reader.
<p>■ <b>Problematic Code:</b></p> <pre> 93: 94:     &lt;mat-card appearance="outlined" class="mat-elevation-z6"&gt; 95:       &lt;div class="mdc-card"&gt; &gt;&gt;&gt; 96:         &lt;h5&gt;&lt;i class='fas fa-comments fa-2x'&gt;&lt;/i&gt; &lt;span style="margin-left: 10px;" [innerHTML]=''ICO_FAQ_QUESTION'   translate:{juicycoin: altcoinName}'&gt;&lt;/span&gt;&lt;/h5&gt; 97:         &lt;small class="text-justify"&gt;{{"ICO_FAQ_ANSWER"   translate}}&lt;/small&gt; 98:       &lt;/div&gt; 99:     &lt;/mat-card&gt;</pre>		
L	routes/userProfile.ts (Line 63)	<b>S2486</b> Handle this exception or don't catch it at all.
<p>■ <b>Problematic Code:</b></p> <pre> 60:         throw new Error('Username is null') 61:       } 62:       username = eval(code) // eslint-disable-line no-eval &gt;&gt;&gt; 63:     } catch (err) { 64:       username = '\\\\' + username 65:     } 66:   } else {</pre>		
L	frontend/src/app/app.routing.ts (Line 236)	<b>S1874</b> '(from: number, length?: number): string' is deprecated.

<b>■ Problematic Code:</b> <pre> 233:  // vuln-code-snippet start tokenSaleChallenge 234:  { 235:    matcher: oauthMatcher, &gt;&gt;&gt; 236:    data: { params: (window.location.href).substr(window.location.href.indexOf('#')) }, 237:    component: OAuthComponent 238:  }, 239:  { // vuln-code-snippet neutral-line tokenSaleChallenge </pre>		
<b>L</b>	frontend/src/main.ts (Line 7)	<b>S1128</b> Remove this unused import of 'platformBrowserDynamic'.
<b>■ Problematic Code:</b> <pre> 4:  */ 5: 6:  import { enableProdMode, importProvidersFrom } from '@angular/core' &gt;&gt;&gt; 7:  import { platformBrowserDynamic } from '@angular/platform-browser-dynamic' 8: 9:  import { AppModule, HttpLoaderFactory } from './app/app.module' 10: import { environment } from './environments/environment' </pre>		
<b>L</b>	lib/utlis.ts (Line 65)	<b>S1874</b> The signature '(from: number, length?: number   undefined): string' of 'str.substr' is deprecated.
<b>■ Problematic Code:</b> <pre> 62: 63: export const trunc = function (str: string, length: number) { 64:   str = str.replace(/(\r\n \n \r)/gm, '') &gt;&gt;&gt; 65:   return (str.length &gt; length) ? str.substr(0, length - 1) + '...' : str 66: } 67: 68: export const version = (module?: string) =&gt; { </pre>		
<b>I</b>	routes/languages.ts (Line 10)	<b>S1135</b> Complete the task associated to this "TODO" comment.
<b>■ Problematic Code:</b> <pre> 7: import fs from 'node:fs' 8: import { type Request, type Response, type NextFunction } from 'express' 9: &gt;&gt;&gt; 10: export function getLanguageList () { // TODO Refactor and extend to also load backend     translations from /i18n/*.json and calculate joint percentage/gauge     11:   return (req: Request, res: Response, next: NextFunction) =&gt; {     12:     const languages: Array&lt;{ key: string, lang: any, icons: string[], shortKey: string,     percentage: unknown, gauge: string }&gt; = []     13:     let count = 0 </pre>		
<b>I</b>	routes/fileUpload.ts (Line 119)	<b>S1135</b> Complete the task associated to this "TODO" comment.

<p>■ <b>Problematic Code:</b></p> <pre> 116:         const yamlString = vm.runInContext('JSON.stringify(yaml.load(data))', sandbox, { timeout: 2000 }) 117:         res.status(410) 118:         next(new Error('B2B customer complaints via file upload have been deprecated for security reasons: ' + utils.trunc(yamlString, 400) + ' (' + file.originalname + ')')) &gt;&gt;&gt; 119:         } catch (err: any) { // TODO: Remove any 120:             if (utils.contains(err.message, 'Invalid string length')    utils.contains(err.message, 'Script execution timed out')) { 121:                 if (challengeUtils.notSolved(challenges.yamlBombChallenge)) { 122:                     challengeUtils.solve(challenges.yamlBombChallenge) </pre>		
<p>I</p>	<p>frontend/src/app/password-strength-info password-strength-info.component.spec.ts (Line 24)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 21:     expect(component).toBeTruthy() 22: }) 23: &gt;&gt;&gt; 24: // todo: unit test each conditional   passwordLength message 25: }) 26: </pre>		
<p>I</p>	<p>frontend/src/app/app.module.ts (Line 16)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 13:     return new TranslateHttpLoader(http, './assets/i18n/', '.json') 14: } 15: &gt;&gt;&gt; 16: @NgModule(/* TODO(standalone-migration): clean up removed NgModule class manually. 17: { 18:     declarations: [AppComponent], 19:     imports: [ </pre>		
<p>I</p>	<p>data/datacreator.ts (Line 76)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 73: 74:     await Promise.all( 75:         challenges.map(async ({ name, category, description, difficulty, hints, mitigationUrl, key, disabledEnv, tutorial, tags }) =&gt; { &gt;&gt;&gt; 76:         // todo(@J12934) change this to use a proper challenge model or something 77:         // eslint-disable-next-line @typescript-eslint/consistent-type-assertions 78:         const { enabled: isChallengeEnabled, disabledBecause } = utils.getChallengeEnablementStatus({ disabledEnv: disabledEnv?.join(';') ?? '' } as ChallengeModel) 79:         description = description.replace('juice-sh.op', config.get&lt;string&gt;('application.domain')) </pre>		

	data/datacreator.ts (Line 93)	<b>S1135</b> Complete the task associated to this "TODO" comment.
<div> <div>■ Problematic Code:</div> <pre> 90:         name, 91:         category, 92:         tags: (tags != null) ? tags.join(',') : undefined, &gt;&gt;&gt; 93:         // todo(@Jl2934) currently missing the 'not available' text. Needs changes to the model and utils functions 94:         description: isChallengeEnabled ? description : (description + ' &lt;em&gt;(This challenge is &lt;strong&gt;potentially harmful&lt;/strong&gt; on ' + disabledBecause + '!)&lt;/em&gt;'), 95:         difficulty, 96:         solved: false, </pre> </div>		
	lib/config.types.ts (Line 2)	<b>S1135</b> Complete the task associated to this "TODO" comment.
<div> <div>■ Problematic Code:</div> <pre> 1: // manually typed definitions for the config file &gt;&gt;&gt; 2: // todo(@jannik.hollenbach) migrate the config schema to something which can automatically generate the types 3: 4: export interface ServerConfig { 5:   port: number </pre> </div>		
	test/cypress/e2e/scoreBoard.spec.ts (Line 30)	<b>S1135</b> Complete the task associated to this "TODO" comment.
<div> <div>■ Problematic Code:</div> <pre> 27:   }) 28: }) 29: &gt;&gt;&gt; 30: xdescribe('/#/score-board-legacy', () =&gt; { // TODO Replace with test based on new Score Board 31:   describe('repeat notification', () =&gt; { 32:     beforeEach(() =&gt; { 33:       cy.visit('/#/score-board-legacy') </pre> </div>		
	lib/startup/validatePreconditions.ts (Line 94)	<b>S1135</b> Complete the task associated to this "TODO" comment.
<div> <div>■ Problematic Code:</div> <pre> 91:         domainDependencies[domain].forEach((dependency: string) =&gt; { 92:           logger.warn(`\${colors.italic(dependency)} will not work as intended without access to \${colors.bold(domain)}`) 93:         }) &gt;&gt;&gt; 94:         return true // TODO Consider switching to "false" with breaking release v16.0.0 or later 95:       }) 96:     } 97: </pre> </div>		
	lib/is-docker.ts (Line 26)	<b>S1135</b> Complete the task associated to this "TODO" comment.

<b>■ Problematic Code:</b> <pre> 23: } 24: 25: export default function isDocker () { &gt;&gt;&gt; 26:   // TODO: Use `??=` when targeting Node.js 16. 27:   if (isDockerCached === undefined) { 28:     isDockerCached = hasDockerEnv()    hasDockerCGroup() 29:   } </pre>		
	lib/codingChallenges.ts (Line 63)	<b>S1135</b> Complete the task associated to this "TODO" comment.
<b>■ Problematic Code:</b> <pre> 60:   if (snippets == null) { 61:     throw new BrokenBoundary('Broken code snippet boundaries for: ' + challengeKey) 62:   } &gt;&gt;&gt; 63:   let snippet = snippets[0] // TODO Currently only a single code snippet is supported 64:   snippet = snippet.replace(/\s?[/#]{0,2} vuln-code-snippet start.*[\r\n]{0,2}/g, '') 65:   snippet = snippet.replace(/\s?[/#]{0,2} vuln-code-snippet end.*/g, '') 66:   snippet = snippet.replace(/.*[/#]{0,2} vuln-code-snippet hide-line[\r\n]{0,2}/g, '') </pre>		
	test/cypress/e2e/restApi.spec.ts (Line 105)	<b>S1135</b> Complete the task associated to this "TODO" comment.
<b>■ Problematic Code:</b> <pre> 102:         console.log('Success') 103:     } 104: }) &gt;&gt;&gt; 105:     cy.expectChallengeSolved({ challenge: 'HTTP-Header XSS' }) // TODO Add missing check for alert presence 106:     } 107: }) 108: }) </pre>		
	test/cypress/e2e/basket.spec.ts (Line 51)	<b>S1135</b> Complete the task associated to this "TODO" comment.
<b>■ Problematic Code:</b> <pre> 48: 49:     cy.visit('/#/basket') 50: &gt;&gt;&gt; 51:     // TODO Verify functionally that it's not the basket of the admin 52:     cy.expectChallengeSolved({ challenge: 'View Basket' }) 53:   }) 54: }) </pre>		
	test/api/quantityApiSpec.ts (Line 185)	<b>S1135</b> Complete the task associated to this "TODO" comment.



<p>■ <b>Problematic Code:</b></p> <pre> 182:         }) 183:     }) 184: &gt;&gt;&gt; 185:     xit('GET quantity of all items for accounting users from IP 123.456.789', () =&gt; { // TODO Check if possible to set IP in frisby tests 186:         return frisby.post(`\${REST_URL}/user/login`, { 187:             headers: jsonHeader, 188:             body: { </pre>		
<p>I</p>	<p>test/api/quantityApiSpec.ts (Line 264)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 261:         }) 262:     }) 263: &gt;&gt;&gt; 264:     xit('PUT quantity as accounting user from IP 123.456.789', () =&gt; { // TODO Check if possible to set IP in frisby tests 265:         return frisby.post(`\${REST_URL}/user/login`, { 266:             headers: jsonHeader, 267:             body: { </pre>		
<p>I</p>	<p>data/datacreator.ts (Line 391)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 388:             persistedProduct) 389:         }) 390:     } &gt;&gt;&gt; 391:         if (deletedDate) void deleteProduct(persistedProduct.id) // TODO Rename into "isDeleted" or "deletedFlag" in config for v14.x release 392:         } else { 393:             throw new Error('No persisted product found!') 394:         } </pre>		
<p>I</p>	<p>routes/fileUpload.ts (Line 88)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 85:         challengeUtils.solveIf(challenges.xxeFileDisclosureChallenge, () =&gt; { return (utils.matchesEtcPasswdFile(xmlString)    utils.matchesSystemIniFile(xmlString)) }) 86:         res.status(410) 87:         next(new Error('B2B customer complaints via file upload have been deprecated for security reasons: ' + utils.trunc(xmlString, 400) + ' (' + file.originalname + ')')) &gt;&gt;&gt; 88:     } catch (err: any) { // TODO: Remove any 89:         if (utils.contains(err.message, 'Script execution timed out')) { 90:             if (challengeUtils.notSolved(challenges.xxeDosChallenge)) { 91:                 challengeUtils.solve(challenges.xxeDosChallenge) </pre>		
<p>I</p>	<p>lib/utils.ts (Line 45)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>

<p>■ <b>Problematic Code:</b></p> <pre> 42: 43: export const endsWith = (str?: string, suffix?: string) =&gt; (str &amp;&amp; suffix) ? str.includes(suffix, str.length - suffix.length) : false 44: &gt;&gt;&gt; 45: export const contains = (str: string, element: string) =&gt; str ? str.includes(element) : false // TODO Inline all usages as this function is not adding any functionality to String.includes 46: 47: export const containsEscaped = function (str: string, element: string) { 48:   return contains(str, element.replace(/"/g, '\\\\"')) </pre>		
	data/static/codefixes adminSectionChallenge_1_correct.t s <b>(Line 2)</b>	<b>S1135</b> Complete the task associated to this "TODO" comment.
<p>■ <b>Problematic Code:</b></p> <pre> 1: const routes: Routes = [ &gt;&gt;&gt; 2:   /* TODO: Externalize admin functions into separate application 3:       that is only accessible inside corporate network. 4:   */ 5:   // { </pre>		
	lib/antiCheat.ts <b>(Line 19)</b>	<b>S1135</b> Complete the task associated to this "TODO" comment.
<p>■ <b>Problematic Code:</b></p> <pre> 16: import median from 'median' 17: import { type ChallengeKey } from 'models/challenge' 18: &gt;&gt;&gt; 19: const coupledChallenges = { // TODO prevent also near-identical challenges (e.g. all null byte file access or dom xss + bonus payload etc.) from counting as cheating 20:   loginAdminChallenge: ['weakPasswordChallenge'], 21:   nullByteChallenge: ['easterEggLevelOneChallenge', 'forgottenDevBackupChallenge', 'forgottenBackupChallenge', 'misplacedSignatureFileChallenge'], 22:   deprecatedInterfaceChallenge: ['uploadTypeChallenge', 'xxeFileDisclosureChallenge', 'xxeDosChallenge', 'yamlBombChallenge'], </pre>		
	frontend/src/hacking-instructor challenges/bonusPayload.ts <b>(Line 21)</b>	<b>S1135</b> Complete the task associated to this "TODO" comment.

<p>■ <b>Problematic Code:</b></p> <pre> 18:         'Assuming you did the **DOM XSS** tutorial already, this one just uses a funnier payload on the _Search_ field.', 19:         fixture: '#product-search-fixture', 20:         unskippable: true, &gt;&gt;&gt; 21:         resolved: waitInMs(10000) // TODO Add check if "DOM XSS" is solved and if not recommend doing that first 22:     }, 23:     { 24:         text: 'Enter or paste this payload into the _Search_ field: &lt;code&gt;&amp;lt;iframe width=&amp;quot;100%&amp;quot; height=&amp;quot;166&amp;quot; scrolling=&amp;quot;no&amp;quot; frameborder=&amp;quot;no&amp;quot; allow=&amp;quot;autoplay&amp;quot; src=&amp;quot;https://w.soundcloud.com/player /?url=https%3A//api.soundcloud.com/tracks/771984076&amp;amp;color=%23ff5500&amp;amp;auto&amp;lowbar;play=tr ue&amp;amp;hide&amp;lowbar;related=false&amp;amp;show&amp;lowbar;comments=true&amp;amp;show&amp;lowbar;user=true&amp;amp;sh ow&amp;lowbar;reposts=false&amp;amp;show&amp;lowbar;teaser=true&amp;quot;&amp;gt;&amp;lt;/iframe&amp;gt;&lt;/code&gt;.', </pre>	
<p>I frontend/src/hacking-instructor challenges/passwordStrength.ts (Line 43)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 40:         text: "Enter the admin's email address into the **email field**.", 41:         fixture: '#email', 42:         unskippable: true, &gt;&gt;&gt; 43:         resolved: waitForInputToHaveValue('#email', 'admin@juice-sh.op') // TODO Use domain from config instead 44:     }, 45:     { 46:         text: 'Now for the password. Lucky for us, the admin chose a really, really, **really** stupid one. Just try any that comes to your mind!', </pre>	
<p>I frontend/src/hacking-instructor challenges/loginBender.ts (Line 22)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>
<p>■ <b>Problematic Code:</b></p> <pre> 19:         "To start this challenge, you'll have to log out first.", 20:         fixture: '#navbarAccount', 21:         unskippable: true, &gt;&gt;&gt; 22:         resolved: waitForLogout() // TODO Add check if "Login Admin" is solved and if not recommend doing that first 23:     }, 24:     { 25:         text: </pre>	
<p>I frontend/src/hacking-instructor challenges/loginJim.ts (Line 22)</p>	<p><b>S1135</b> Complete the task associated to this "TODO" comment.</p>

**■ Problematic Code:**

```
19:         "To start this challenge, you'll have to log out first.",
20:         fixture: '#navbarAccount',
21:         unskippable: true,
>>> 22:         resolved: waitForLogout() // TODO Add check if "Login Admin" is solved and if not
recommend doing that first
23:     },
24:     {
25:         text:
```

[illegible]



<p>■ <b>Security Hotspot Code:</b></p> <pre> 62:         tick() 63: 64:         expect(req.request.method).toBe('POST') &gt;&gt;&gt; 65:         expect(req.request.body).toEqual({ password: 's3cr3t!', initialToken: 'initialToken', setupToken: 'setupToken' }) 66:         expect(res).toBe(undefined) 67:         httpMock.verify() 68:     }) </pre>		
<div>H</div>	frontend/src/app/Services two-factor-auth-service.spec.ts (Line 81)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 78:         tick() 79: 80:         expect(req.request.method).toBe('POST') &gt;&gt;&gt; 81:         expect(req.request.body).toEqual({ password: 's3cr3t!' }) 82:         expect(res).toBe(undefined) 83:         httpMock.verify() 84:     }) </pre>		
<div>H</div>	frontend/src/app/oauth oauth.component.spec.ts (Line 84)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 81:     it('will create regular user account with base64 encoded reversed email as password', fakeAsync(() =&gt; { 82:         userService.oauthLogin.and.returnValue(of({ email: 'test@test.com' }))) 83:         component.ngOnInit() &gt;&gt;&gt; 84:         expect(userService.save).toHaveBeenCalledWith({ email: 'test@test.com', password: 'bw9jLnRzZXRADHNldA==', passwordRepeat: 'bw9jLnRzZXRADHNldA==' }) 85:     })) 86: 87:     it('logs in user even after failed account creation as account might already have existed from previous OAuth login', fakeAsync(() =&gt; { </pre>		
<div>H</div>	frontend/src/app/oauth oauth.component.spec.ts (Line 84)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 81:     it('will create regular user account with base64 encoded reversed email as password', fakeAsync(() =&gt; { 82:         userService.oauthLogin.and.returnValue(of({ email: 'test@test.com' }))) 83:         component.ngOnInit() &gt;&gt;&gt; 84:         expect(userService.save).toHaveBeenCalledWith({ email: 'test@test.com', password: 'bw9jLnRzZXRADHNldA==', passwordRepeat: 'bw9jLnRzZXRADHNldA==' }) 85:     })) 86: 87:     it('logs in user even after failed account creation as account might already have existed from previous OAuth login', fakeAsync(() =&gt; { </pre>		

<div>H</div>	frontend/src/app/oauth oauth.component.spec.ts (Line 91)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 88:     userService.oauthLogin.and.returnValue(of({ email: 'test@test.com' })) 89:     userService.save.and.returnValue(throwError({ error: 'Account already exists' })) 90:     component.ngOnInit() &gt;&gt;&gt; 91:     expect(userService.login).toHaveBeenCalledWith({ email: 'test@test.com', password: 'bw9jLnRzZXRAdHNldA==', oauth: true }) 92:   }) 93: 94:   it('removes authentication token and basket id on failed subsequent regular login attempt', fakeAsync(() =&gt; { </pre> </div>		
<div>H</div>	frontend/src/app/register register.component.spec.ts (Line 115)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 112:   it('password should not be more than 20 characters', () =&gt; { 113:     let password: string = '' 114:     for (let i = 0; i &lt; 41; i++) { &gt;&gt;&gt; 115:       password += 'a' 116:     } 117:     component.passwordControl.setValue(password) 118:     expect(component.passwordControl.valid).toBeFalsy() </pre> </div>		
<div>H</div>	frontend/src/app/register register.component.spec.ts (Line 133)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 130:   }) 131: 132:   it('password and repeat password should be the same', () =&gt; { &gt;&gt;&gt; 133:     const password: string = 'aaaaa' 134:     const passwordRepeat: string = 'aaaaa' 135:     component.passwordControl.setValue(password) 136:     component.repeatPasswordControl.setValue('bbbbbb') </pre> </div>		
<div>H</div>	frontend/src/app/register register.component.spec.ts (Line 134)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 131: 132:   it('password and repeat password should be the same', () =&gt; { 133:     const password: string = 'aaaaa' &gt;&gt;&gt; 134:     const passwordRepeat: string = 'aaaaa' 135:     component.passwordControl.setValue(password) 136:     component.repeatPasswordControl.setValue('bbbbbb') 137:     expect(component.repeatPasswordControl.valid).toBeFalsy() </pre> </div>		



<div>H</div>	frontend/src/app/register register.component.spec.ts (Line 151)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 148:     component.repeatPasswordControl.setValue('password') 149:     component.securityQuestionControl.setValue(1) 150:     component.securityAnswerControl.setValue('Answer') &gt;&gt;&gt; 151:     const user = { email: 'x@x.xx', password: 'password', passwordRepeat: 'password', securityQuestion: { id: 1, question: 'Wat is?' }, securityAnswer: 'Answer' } 152:     const securityAnswerObject = { UserId: 1, answer: 'Answer', SecurityQuestionId: 1 } 153:     component.save() 154:     tick() </pre> </div>		
<div>H</div>	frontend/src/app/register register.component.spec.ts (Line 151)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 148:     component.repeatPasswordControl.setValue('password') 149:     component.securityQuestionControl.setValue(1) 150:     component.securityAnswerControl.setValue('Answer') &gt;&gt;&gt; 151:     const user = { email: 'x@x.xx', password: 'password', passwordRepeat: 'password', securityQuestion: { id: 1, question: 'Wat is?' }, securityAnswer: 'Answer' } 152:     const securityAnswerObject = { UserId: 1, answer: 'Answer', SecurityQuestionId: 1 } 153:     component.save() 154:     tick() </pre> </div>		
<div>H</div>	test/api/2faSpec.ts (Line 174)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 171:     it('GET should indicate 2fa is setup for 2fa enabled users', async () =&gt; { 172:         const { token } = await login({ 173:             email: `wurstbrot@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 174:             password: 'EinBelegtesBrotMitSchinkenSCHINKEN!', 175:             totpSecret: 'IFTXE3SPOEYVURT2MRYGI52TKJ4HC3KH' 176:         }) 177:     }) </pre> </div>		
<div>H</div>	test/api/2faSpec.ts (Line 200)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 197:     it('GET should indicate 2fa is not setup for users with 2fa disabled', async () =&gt; { 198:         const { token } = await login({ 199:             email: `J12934@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 200:             password: '0Y8rMnww\$*9VFYE\$59-!Fg1L6t&amp;6lB' 201:         }) 202:     }) 203:     // @ts-expect-error FIXME promise return handling broken </pre> </div>		

<div>H</div>	test/api/2faSpec.ts (Line 236)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 233: describe('/rest/2fa/setup', () =&gt; { 234:   it('POST should be able to setup 2fa for accounts without 2fa enabled', async () =&gt; { 235:     const email = 'fooooo1@bar.com' &gt;&gt;&gt; 236:     const password = '123456' 237: 238:     const secret = 'ASDVAJSDUASZGDIADBJs' 239: </pre> </div>		
<div>H</div>	test/api/2faSpec.ts (Line 282)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 279: 280:   it('POST should fail if the password doesnt match', async () =&gt; { 281:     const email = 'fooooo2@bar.com' &gt;&gt;&gt; 282:     const password = '123456' 283: 284:     const secret = 'ASDVAJSDUASZGDIADBJs' 285: </pre> </div>		
<div>H</div>	test/api/2faSpec.ts (Line 311)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 308: 309:   it('POST should fail if the initial token is incorrect', async () =&gt; { 310:     const email = 'fooooo3@bar.com' &gt;&gt;&gt; 311:     const password = '123456' 312: 313:     const secret = 'ASDVAJSDUASZGDIADBJs' 314: </pre> </div>		
<div>H</div>	test/api/2faSpec.ts (Line 340)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 337: 338:   it('POST should fail if the token is of the wrong type', async () =&gt; { 339:     const email = 'fooooo4@bar.com' &gt;&gt;&gt; 340:     const password = '123456' 341: 342:     const secret = 'ASDVAJSDUASZGDIADBJs' 343: </pre> </div>		
<div>H</div>	test/api/2faSpec.ts (Line 369)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 366: 367:   it('POST should fail if the account has already set up 2fa', async () =&gt; { 368:     const email = `wurstbrot@\${config.get&lt;string&gt;('application.domain')}` &gt;&gt;&gt; 369:     const password = 'EinBelegtesBrotMitSchinkenSCHINKEN!' 370:     const totpSecret = 'IFTXE3SPOEYVURT2MRYGI52TKJ4HC3KH' 371: 372:     const { token } = await login({ email, password, totpSecret }) </pre>		
H	test/api/2faSpec.ts (Line 398)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 395: describe('/rest/2fa/disable', () =&gt; { 396:   it('POST should be able to disable 2fa for account with 2fa enabled', async () =&gt; { 397:     const email = 'fooooodisablel@bar.com' &gt;&gt;&gt; 398:     const password = '123456' 399:     const totpSecret = 'ASDVAJSDUASZGDIADBJS' 400: 401:     await register({ email, password, totpSecret }) </pre>		
H	test/api/2faSpec.ts (Line 435)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 432: 433:   it('POST should not be possible to disable 2fa without the correct password', async () =&gt; { 434:     const email = 'fooooodisablel@bar.com' &gt;&gt;&gt; 435:     const password = '123456' 436:     const totpSecret = 'ASDVAJSDUASZGDIADBJS' 437: 438:     await register({ email, password, totpSecret }) </pre>		
H	test/api/addressApiSpec.ts (Line 20)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 17:   headers: jsonHeader, 18:   body: { 19:     email: 'jim@juice-sh.op', &gt;&gt;&gt; 20:     password: 'ncc-1701' 21:   } 22: }) 23:   .expect('status', 200) </pre>		
H	test/api/authenticatedUsersSpec.ts (Line 21)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 18:     return frisby.get(`\${REST_URL}/user/authentication-details`, { headers: authHeader }) 19:         .expect('status', 200) 20:         .expect('json', 'data.?', { &gt;&gt;&gt; 21:             password: '*****' 22:         }) 23:     }) 24: </pre>		
H	test/api/authenticatedUsersSpec.ts (Line 30)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 27:     headers: jsonHeader, 28:     body: { 29:         email: `jim\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 30:         password: 'ncc-1701' 31:     } 32: }).promise() 33: </pre>		
H	test/api/basketApiSpec.ts (Line 25)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 22:     headers: jsonHeader, 23:     body: { 24:         email: 'jim@juice-sh.op', &gt;&gt;&gt; 25:         password: 'ncc-1701' 26:     } 27: }) 28:     .expect('status', 200) </pre>		
H	test/api/basketApiSpec.ts (Line 101)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 98:     headers: jsonHeader, 99:     body: { 100:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 101:         password: 'bW9jLmxpYWlnQGhjaW5pbWlpay5ucmVvamI=' 102:     } 103: }) 104:     .expect('status', 200) </pre>		
H	test/api/basketItemApiSpec.ts (Line 21)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 18:     headers: jsonHeader, 19:     body: { 20:         email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 21:         password: 'ncc-1701' 22:     } 23: }) 24:     .expect('status', 200) </pre>		
H	test/api/chatBotSpec.ts (Line 56)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 53:     it('GET bot state for authenticated users contains request for username', async () =&gt; { 54:         const { token } = await login({ 55:             email: `J12934@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 56:             password: '0Y8rMnww\$*9VFYE\$59-!FglL6t&amp;6lB' 57:         }) 58: 59:         await frisby.setup({ </pre>		
H	test/api/chatBotSpec.ts (Line 77)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 74:     it('Asks for username if not defined', async () =&gt; { 75:         const { token } = await login({ 76:             email: `J12934@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 77:             password: '0Y8rMnww\$*9VFYE\$59-!FglL6t&amp;6lB' 78:         }) 79: 80:         const testCommand = trainingData.data[0].utterances[0] </pre>		
H	test/api/chatBotSpec.ts (Line 108)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 105:     } 106:     const { token } = await login({ 107:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 108:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 109:     }) 110: 111:     bot.addUser('1337', 'bkimminich') </pre>		
H	test/api/chatBotSpec.ts (Line 140)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 137:      } 138:      const { token } = await login({ 139:        email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 140:        password: 'bW9jLmxpYWlnQGhjaW5pbWlpay5ucmVvamI=' 141:      }) 142:      bot.addUser('12345', 'bkimminich') 143:      const testCommand = trainingData.data[0].utterances[0] </pre>		
H	test/api/chatBotSpec.ts (Line 174)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 171:      it('Responds with product price when asked question with product name', async () =&gt; { 172:        const { token } = await login({ 173:          email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 174:          password: 'bW9jLmxpYWlnQGhjaW5pbWlpay5ucmVvamI=' 175:        }) 176:        const { json } = await frisby.get(API_URL + '/Products/1') 177:        .expect('status', 200) </pre>		
H	test/api/chatBotSpec.ts (Line 205)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 202:      it('Greets back registered user after being told username', async () =&gt; { 203:        const { token } = await login({ 204:          email: `stan@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 205:          password: 'ship coffin krypt cross estate supply insurance asbestos souvenir' 206:        }) 207:        await frisby.setup({ 208:          request: { </pre>		
H	test/api/chatBotSpec.ts (Line 250)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 247:      const functionTest = trainingData.data.filter(data =&gt; data.intent === 'queries.functionTest') 248:      const { token } = await login({ 249:        email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 250:        password: 'bW9jLmxpYWlnQGhjaW5pbWlpay5ucmVvamI=' 251:      }) 252:      const testCommand = functionTest[0].utterances[0] 253:      const testResponse = '3be2e438b7f3d04c89d7749f727bb3bd' </pre>		
H	test/api/chatBotSpec.ts (Line 287)	Review this potentially hard-coded password. Category: Authentication

<div> <div>■ Security Hotspot Code:</div> <pre> 284:         }, 285:         body: { 286:             email: `chatbot-testuser@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 287:             password: 'testtesttest', 288:             username: '', 289:             role: 'admin' 290:         } </pre> </div>		
<div>H</div>	test/api/chatBotSpec.ts (Line 295)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 292: 293:     const { token } = await login({ 294:         email: `chatbot-testuser@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 295:         password: 'testtesttest' 296:     }) 297: 298:     const functionTest = trainingData.data.filter(data =&gt; data.intent === 'queries.functionTest') </pre> </div>		
<div>H</div>	test/api/dataExportApiSpec.ts (Line 21)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 18:     headers: jsonHeader, 19:     body: { 20:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 21:         password: 'bW9jLmxpYWlnQGhjaW5pbWlpay5ucmVvamI=' 22:     } 23: }) 24:     .expect('status', 200) </pre> </div>		
<div>H</div>	test/api/dataExportApiSpec.ts (Line 48)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 45:     headers: jsonHeader, 46:     body: { 47:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 48:         password: 'bW9jLmxpYWlnQGhjaW5pbWlpay5ucmVvamI=' 49:     } 50: }) 51:     .expect('status', 200) </pre> </div>		
<div>H</div>	test/api/dataExportApiSpec.ts (Line 77)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 74:     headers: jsonHeader, 75:     body: { 76:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 77:         password: 'bW9jLmXPYWlnQGhjaW5pbWlpay5ucmVvamI=' 78:     } 79: }) 80:     .expect('status', 200) </pre>		
H	test/api/dataExportApiSpec.ts (Line 112)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 109:    headers: jsonHeader, 110:    body: { 111:        email: 'amy@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 112:        password: 'Klf.....' 113:    } 114: }) 115:    .expect('status', 200) </pre>		
H	test/api/dataExportApiSpec.ts (Line 152)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 149:    headers: jsonHeader, 150:    body: { 151:        email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 152:        password: 'ncc-1701' 153:    } 154: }) 155:    .expect('status', 200) </pre>		
H	test/api/dataExportApiSpec.ts (Line 194)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 191:    headers: jsonHeader, 192:    body: { 193:        email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 194:        password: 'ncc-1701' 195:    } 196: }) 197:    .expect('status', 200) </pre>		
H	test/api/dataExportApiSpec.ts (Line 234)	Review this potentially hard-coded password. Category: Authentication



<p>■ <b>Security Hotspot Code:</b></p> <pre> 231:     headers: jsonHeader, 232:     body: { 233:         email: 'amy@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 234:         password: 'Klf.....' 235:     } 236: }) 237:     .expect('status', 200) </pre>		
H	test/api/dataExportApiSpec.ts (Line 282)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 279:     headers: jsonHeader, 280:     body: { 281:         email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 282:         password: 'ncc-1701' 283:     } 284: }) 285:     .expect('status', 200) </pre>		
H	test/api/dataExportApiSpec.ts (Line 332)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 329:     headers: jsonHeader, 330:     body: { 331:         email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 332:         password: 'ncc-1701' 333:     } 334: }) 335:     .expect('status', 200) </pre>		
H	test/api/deliveryApiSpec.ts (Line 23)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 20:     headers: jsonHeader, 21:     body: { 22:         email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 23:         password: 'ncc-1701' 24:     } 25: }) 26:     .expect('status', 200) </pre>		
H	test/api/deliveryApiSpec.ts (Line 52)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 49:         headers: jsonHeader, 50:         body: { 51:             email: 'ciso@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 52:             password: 'mDLx?94T~1CfVfZMzw@sJ9f?s3L6lbMqE70FfI8^54jbNikY5fymx7c!YbJb' 53:         } 54:     }) 55:     .expect('status', 200) </pre>		
H	test/api/deliveryApiSpec.ts (Line 83)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 80:         headers: jsonHeader, 81:         body: { 82:             email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 83:             password: 'ncc-1701' 84:         } 85:     }) 86:     .expect('status', 200) </pre>		
H	test/api/deliveryApiSpec.ts (Line 111)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 108:        headers: jsonHeader, 109:        body: { 110:            email: 'ciso@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 111:            password: 'mDLx?94T~1CfVfZMzw@sJ9f?s3L6lbMqE70FfI8^54jbNikY5fymx7c!YbJb' 112:        } 113:    }) 114:    .expect('status', 200) </pre>		
H	test/api/deluxeApiSpec.ts (Line 35)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 32:        headers: jsonHeader, 33:        body: { 34:            email: 'bender@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 35:            password: 'OhG0dPleaseInsertLiquor!' 36:        } 37:    }) 38:    .expect('status', 200) </pre>		
H	test/api/deluxeApiSpec.ts (Line 53)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 50:     headers: jsonHeader, 51:     body: { 52:         email: 'ciso@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 53:         password: 'mDLx?94T~1CfVfZMzw@sJ9f?s3L6lbMqE70FfI8^54jbNikY5fymx7c!YbJb' 54:     } 55: }) 56:     .expect('status', 200) </pre>		
H	test/api/deluxeApiSpec.ts (Line 71)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 68:     headers: jsonHeader, 69:     body: { 70:         email: 'admin@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 71:         password: 'admin123' 72:     } 73: }) 74:     .expect('status', 200) </pre>		
H	test/api/deluxeApiSpec.ts (Line 89)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 86:     headers: jsonHeader, 87:     body: { 88:         email: 'accountant@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 89:         password: 'i am an awesome accountant' 90:     } 91: }) 92:     .expect('status', 200) </pre>		
H	test/api/deluxeApiSpec.ts (Line 105)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 102:  it('POST upgrade deluxe membership status for customers', async () =&gt; { 103:      const { token } = await login({ 104:          email: `bender@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 105:          password: 'OhG0dPleaseInsertLiquor!' 106:      }) 107: 108:      const { json } = await frisby.get(API_URL + '/Cards', { </pre>		
H	test/api/deluxeApiSpec.ts (Line 129)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 126:   it('POST deluxe membership status with wrong card id throws error', async () =&gt; { 127:     const { token } = await login({ 128:       email: `jim\${config.get&lt;string&gt;('application.domain')}` , &gt;&gt;&gt; 129:       password: 'ncc-1701' 130:     }) 131: 132:     await frisby.post(REST_URL + '/deluxe-membership', { </pre>		
<div>H</div>	test/api/deluxeApiSpec.ts (Line 149)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 146:     headers: jsonHeader, 147:     body: { 148:       email: 'ciso@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 149:       password: 'mDLx?94T~1CfVfZMzw@sJ9f?s3L6lbMqE70FfI8^54jbNiky5fymx7c!YbJb' 150:     } 151:   }) 152:   .expect('status', 200) </pre>		
<div>H</div>	test/api/deluxeApiSpec.ts (Line 170)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 167:     headers: jsonHeader, 168:     body: { 169:       email: 'admin@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 170:       password: 'admin123' 171:     } 172:   }) 173:   .expect('status', 200) </pre>		
<div>H</div>	test/api/deluxeApiSpec.ts (Line 191)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 188:     headers: jsonHeader, 189:     body: { 190:       email: 'accountant@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 191:       password: 'i am an awesome accountant' 192:     } 193:   }) 194:   .expect('status', 200) </pre>		
<div>H</div>	test/api/erasureRequestApiSpec.ts (Line 18)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 15:     headers: jsonHeader, 16:     body: { 17:         email: 'bjoern@owasp.org', &gt;&gt;&gt; 18:         password: 'kitten lesser pooch karate buffoon indoors' 19:     } 20: }) 21:     .expect('status', 200) </pre>		
H	test/api/erasureRequestApiSpec.ts (Line 37)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 34:     headers: jsonHeader, 35:     body: { 36:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 37:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 38:     } 39: }) 40:     .expect('status', 200) </pre>		
H	test/api/erasureRequestApiSpec.ts (Line 64)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 61:     headers: jsonHeader, 62:     body: { 63:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 64:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 65:     } 66: }) 67:     .expect('status', 200) </pre>		
H	test/api/erasureRequestApiSpec.ts (Line 80)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 77:     headers: jsonHeader, 78:     body: { 79:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 80:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 81:     } 82: }) 83:     .expect('status', 200) </pre>		
H	test/api/erasureRequestApiSpec.ts (Line 99)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 96:     headers: jsonHeader, 97:     body: { 98:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 99:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 100:     } 101: }) 102:     .expect('status', 200) </pre>		
	test/api/erasureRequestApiSpec.ts (Line 119)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 116:     headers: jsonHeader, 117:     body: { 118:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 119:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 120:     } 121: }) 122:     .expect('status', 200) </pre>		
	test/api/erasureRequestApiSpec.ts (Line 140)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 137:     headers: jsonHeader, 138:     body: { 139:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 140:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 141:     } 142: }) 143:     .expect('status', 200) </pre>		
	test/api/feedbackApiSpec.ts (Line 120)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 117:     headers: jsonHeader, 118:     body: { 119:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 120:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 121:     } 122: }) 123:     .expect('status', 200) </pre>		
	test/api/feedbackApiSpec.ts (Line 153)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 150:     headers: jsonHeader, 151:     body: { 152:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 153:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 154:     } 155: }) 156: .expect('status', 200) </pre>		
H	test/api/loginApiSpec.ts (Line 21)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 18:     headers: jsonHeader, 19:     body: { 20:         email: 'kalli@kasper.le', &gt;&gt;&gt; 21:         password: 'kallliiii' 22:     } 23: }) 24: .expect('status', 201) </pre>		
H	test/api/loginApiSpec.ts (Line 30)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 27:     headers: jsonHeader, 28:     body: { 29:         email: 'kalli@kasper.le', &gt;&gt;&gt; 30:         password: 'kallliiii' 31:     } 32: }) 33: .expect('status', 200) </pre>		
H	test/api/loginApiSpec.ts (Line 46)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 43: it('POST login non-existing user', () =&gt; { 44:     return frisby.post(REST_URL + '/user/login', { 45:         email: 'otto@mei.er', &gt;&gt;&gt; 46:         password: 'ooootto' 47:     }, { json: true }) 48:     .expect('status', 401) 49: }) </pre>		
H	test/api/loginApiSpec.ts (Line 64)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 61:     headers: jsonHeader, 62:     body: { 63:         email: 'admin@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 64:         password: 'admin123' 65:     } 66: }) 67:     .expect('status', 200) </pre>		
H	test/api/loginApiSpec.ts (Line 79)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 76:     headers: jsonHeader, 77:     body: { 78:         email: 'support@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 79:         password: 'J6aVjTgOpRs@?5l!Zkq2AYnCE@RF\$P' 80:     } 81: }) 82:     .expect('status', 200) </pre>		
H	test/api/loginApiSpec.ts (Line 94)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 91:     headers: jsonHeader, 92:     body: { 93:         email: 'mc.safesearch@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 94:         password: 'Mr. N00dles' 95:     } 96: }) 97:     .expect('status', 200) </pre>		
H	test/api/loginApiSpec.ts (Line 109)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 106:    headers: jsonHeader, 107:    body: { 108:        email: 'amy@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 109:        password: 'Klf.....' 110:    } 111: }) 112:    .expect('status', 200) </pre>		
H	test/api/loginApiSpec.ts (Line 124)	Review this potentially hard-coded password. Category: Authentication



<p>■ <b>Security Hotspot Code:</b></p> <pre> 121:     headers: jsonHeader, 122:     body: { 123:         email: 'wurstbrot@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 124:         password: 'EinBelegtesBrotMitSchinkenSCHINKEN!' 125:     } 126: }) 127:     .expect('status', 401) </pre>		
	test/api/loginApiSpec.ts (Line 142)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 139:     headers: jsonHeader, 140:     body: { 141:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 142:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 143:     } 144: }) 145:     .expect('status', 200) </pre>		
	test/api/loginApiSpec.ts (Line 245)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 242:     headers: jsonHeader, 243:     body: { 244:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 245:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 246:     } 247: }) 248:     .expect('status', 200) </pre>		
	test/api/loginApiSpec.ts (Line 266)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 263:     headers: jsonHeader, 264:     body: { 265:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 266:         password: 'bW9jLmXpYWlnQGhjaW5pbWlpay5ucmVvamI=' 267:     } 268: }) 269:     .expect('status', 200) </pre>		
	test/api/memoryApiSpec.ts (Line 26)	Review this potentially hard-coded password. Category: Authentication

<div> <div>■ Security Hotspot Code:</div> <pre> 23:     headers: jsonHeader, 24:     body: { 25:         email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 26:         password: 'ncc-1701' 27:     } 28: }) 29:     .expect('status', 200) </pre> </div>		
<div>H</div>	test/api/memoryApiSpec.ts (Line 64)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 61:     headers: jsonHeader, 62:     body: { 63:         email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 64:         password: 'ncc-1701' 65:     } 66: }) 67:     .expect('status', 200) </pre> </div>		
<div>H</div>	test/api/memoryApiSpec.ts (Line 86)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 83:     headers: jsonHeader, 84:     body: { 85:         email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 86:         password: 'ncc-1701' 87:     } 88: }) 89:     .expect('status', 200) </pre> </div>		
<div>H</div>	test/api/memoryApiSpec.ts (Line 112)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 109:    headers: jsonHeader, 110:    body: { 111:        email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 112:        password: 'ncc-1701' 113:    } 114: }) 115:    .expect('status', 200) </pre> </div>		
<div>H</div>	test/api/memoryApiSpec.ts (Line 142)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 139:     headers: jsonHeader, 140:     body: { 141:         email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 142:         password: 'ncc-1701' 143:     } 144: }) 145:     .expect('status', 200) </pre>		
H	test/api/orderHistoryApiSpec.ts (Line 19)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 16:     headers: jsonHeader, 17:     body: { 18:         email: 'admin@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 19:         password: 'admin123' 20:     } 21: }) 22:     .expect('status', 200) </pre>		
H	test/api/orderHistoryApiSpec.ts (Line 56)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 53:     headers: jsonHeader, 54:     body: { 55:         email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 56:         password: 'ncc-1701' 57:     } 58: }) 59:     .expect('status', 200) </pre>		
H	test/api/orderHistoryApiSpec.ts (Line 73)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 70:     headers: jsonHeader, 71:     body: { 72:         email: 'admin@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 73:         password: 'admin123' 74:     } 75: }) 76:     .expect('status', 200) </pre>		
H	test/api/orderHistoryApiSpec.ts (Line 90)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 87:     headers: jsonHeader, 88:     body: { 89:         email: 'accountant@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 90:         password: 'i am an awesome accountant' 91:     } 92: }) 93:     .expect('status', 200) </pre>		
H	test/api/orderHistoryApiSpec.ts (Line 109)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 106:    headers: jsonHeader, 107:    body: { 108:        email: 'admin@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 109:        password: 'admin123' 110:    } 111: }) 112:    .expect('status', 200) </pre>		
H	test/api/orderHistoryApiSpec.ts (Line 129)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 126:    headers: jsonHeader, 127:    body: { 128:        email: 'jim@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 129:        password: 'ncc-1701' 130:    } 131: }) 132:    .expect('status', 200) </pre>		
H	test/api/orderHistoryApiSpec.ts (Line 149)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 146:    headers: jsonHeader, 147:    body: { 148:        email: 'accountant@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 149:        password: 'i am an awesome accountant' 150:    } 151: }) 152:    .expect('status', 200) </pre>		
H	test/api/passwordApiSpec.ts (Line 20)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 17:         headers: jsonHeader, 18:         body: { 19:             email: 'kuni@be.rt', &gt;&gt;&gt; 20:             password: 'kunigunde' 21:         } 22:     }) 23:     .expect('status', 201) </pre>		
H	test/api/passwordApiSpec.ts (Line 29)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 26:         headers: jsonHeader, 27:         body: { 28:             email: 'kuni@be.rt', &gt;&gt;&gt; 29:             password: 'kunigunde' 30:         } 31:     }) 32:     .expect('status', 200) </pre>		
H	test/api/passwordApiSpec.ts (Line 47)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 44:         headers: jsonHeader, 45:         body: { 46:             email: 'bjoern@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 47:             password: 'monkey summer birthday are all bad passwords but work just fine in a long passphrase' 48:         } 49:     }) 50:     .expect('status', 200) </pre>		
H	test/api/passwordApiSpec.ts (Line 93)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 90:         headers: jsonHeader, 91:         body: { 92:             email: 'bender@' + config.get&lt;string&gt;('application.domain'), &gt;&gt;&gt; 93:             password: 'OhG0dPleaseInsertLiquor!' 94:         } 95:     }) 96:     .expect('status', 200) </pre>		
H	test/api/paymentApiSpec.ts (Line 20)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 17:     headers: jsonHeader, 18:     body: { 19:         email: 'jim@juice-sh.op', &gt;&gt;&gt; 20:         password: 'ncc-1701' 21:     } 22: }) 23:     .expect('status', 200) </pre>		
H	test/api/productReviewApiSpec.ts (Line 112)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 109:     headers: jsonHeader, 110:     body: { 111:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 112:         password: 'bW9jLmxpYWlnQGhjaW5pbWlpay5ucmVvamI=' 113:     } 114: }) 115:     .expect('status', 200) </pre>		
H	test/api/productReviewApiSpec.ts (Line 132)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 129:     headers: jsonHeader, 130:     body: { 131:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 132:         password: 'bW9jLmxpYWlnQGhjaW5pbWlpay5ucmVvamI=' 133:     } 134: }) 135:     .expect('status', 200) </pre>		
H	test/api/profileImageUploadSpec.ts (Line 25)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 22:     headers: jsonHeader, 23:     body: { 24:         email: `jim@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 25:         password: 'ncc-1701' 26:     } 27: }) 28:     .expect('status', 200) </pre>		
H	test/api/profileImageUploadSpec.ts (Line 52)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 49:     headers: jsonHeader, 50:     body: { 51:         email: `jim\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 52:         password: 'ncc-1701' 53:     } 54: }) 55:     .expect('status', 200) </pre>		
H	test/api/profileImageUploadSpec.ts (Line 97)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 94:     headers: jsonHeader, 95:     body: { 96:         email: `jim\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 97:         password: 'ncc-1701' 98:     } 99: }) 100:     .expect('status', 200) </pre>		
H	test/api/profileImageUploadSpec.ts (Line 123)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 120:     headers: jsonHeader, 121:     body: { 122:         email: `jim\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 123:         password: 'ncc-1701' 124:     } 125: }) 126:     .expect('status', 200) </pre>		
H	test/api/profileImageUploadSpec.ts (Line 164)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 161:     headers: jsonHeader, 162:     body: { 163:         email: `jim\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 164:         password: 'ncc-1701' 165:     } 166: }) 167:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 21)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 18:     headers: jsonHeader, 19:     body: { 20:         email: `jim\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 21:         password: 'ncc-1701' 22:     } 23: }) 24:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 38)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 35:     headers: jsonHeader, 36:     body: { 37:         email: `admin\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 38:         password: 'admin123' 39:     } 40: }) 41:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 55)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 52:     headers: jsonHeader, 53:     body: { 54:         email: `accountant\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 55:         password: 'i am an awesome accountant' 56:     } 57: }) 58:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 72)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 69:     headers: jsonHeader, 70:     body: { 71:         email: `jim\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 72:         password: 'ncc-1701' 73:     } 74: }) 75:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 93)	Review this potentially hard-coded password. Category: Authentication



<p>■ <b>Security Hotspot Code:</b></p> <pre> 90:     headers: jsonHeader, 91:     body: { 92:         email: `admin@\${config.get&lt;string&gt;('application.domain')}``, &gt;&gt;&gt; 93:         password: 'admin123' 94:     } 95: }) 96:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 114)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 111:     headers: jsonHeader, 112:     body: { 113:         email: `accountant@\${config.get&lt;string&gt;('application.domain')}``, &gt;&gt;&gt; 114:         password: 'i am an awesome accountant' 115:     } 116: }) 117:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 137)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 134:     headers: jsonHeader, 135:     body: { 136:         email: `jim@\${config.get&lt;string&gt;('application.domain')}``, &gt;&gt;&gt; 137:         password: 'ncc-1701' 138:     } 139: }) 140:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 155)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 152:     headers: jsonHeader, 153:     body: { 154:         email: `admin@\${config.get&lt;string&gt;('application.domain')}``, &gt;&gt;&gt; 155:         password: 'admin123' 156:     } 157: }) 158:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 173)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 170:     headers: jsonHeader, 171:     body: { 172:         email: `accountant@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 173:         password: 'i am an awesome accountant' 174:     } 175: }) 176: .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 190)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 187:     headers: jsonHeader, 188:     body: { 189:         email: `accountant@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 190:         password: 'i am an awesome accountant' 191:     } 192: }) 193: .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 207)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 204:     headers: jsonHeader, 205:     body: { 206:         email: `jim@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 207:         password: 'ncc-1701' 208:     } 209: }) 210: .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 228)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 225:     headers: jsonHeader, 226:     body: { 227:         email: `jim@\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 228:         password: 'ncc-1701' 229:     } 230: }) 231: .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 249)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 246:     headers: jsonHeader, 247:     body: { 248:         email: `accountant@\${config.get&lt;string&gt;('application.domain')}` , &gt;&gt;&gt; 249:         password: 'i am an awesome accountant' 250:     } 251: }) 252:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 269)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 266:     headers: jsonHeader, 267:     body: { 268:         email: `accountant@\${config.get&lt;string&gt;('application.domain')}` , &gt;&gt;&gt; 269:         password: 'i am an awesome accountant' 270:     } 271: }) 272:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 292)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 289:     headers: jsonHeader, 290:     body: { 291:         email: `accountant@\${config.get&lt;string&gt;('application.domain')}` , &gt;&gt;&gt; 292:         password: 'i am an awesome accountant' 293:     } 294: }) 295:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 309)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 306:     headers: jsonHeader, 307:     body: { 308:         email: `admin@\${config.get&lt;string&gt;('application.domain')}` , &gt;&gt;&gt; 309:         password: 'admin123' 310:     } 311: }) 312:     .expect('status', 200) </pre>		
H	test/api/quantityApiSpec.ts (Line 326)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 323:     headers: jsonHeader, 324:     body: { 325:         email: `jim\${config.get&lt;string&gt;('application.domain')}`, &gt;&gt;&gt; 326:         password: 'ncc-1701' 327:     } 328: }) 329:     .expect('status', 200) </pre>		
H	test/api/securityAnswerApiSpec.ts (Line 44)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 41:     it('POST security answer for a newly registered user', () =&gt; { 42:         return frisby.post(`\${API_URL}/Users`, { 43:             email: 'new.user@te.st', &gt;&gt;&gt; 44:             password: '12345' 45:         }, { json: true }) 46:         .expect('status', 201) 47:         .then(({ json }) =&gt; { </pre>		
H	test/api/userApiSpec.ts (Line 45)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 42:     headers: jsonHeader, 43:     body: { 44:         email: 'horst@horstma.nn', &gt;&gt;&gt; 45:         password: 'hooooorst' 46:     } 47: }) 48:     .expect('status', 201) </pre>		
H	test/api/userApiSpec.ts (Line 63)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 60:     headers: jsonHeader, 61:     body: { 62:         email: 'horst2@horstma.nn', &gt;&gt;&gt; 63:         password: 'hooooorst', 64:         role: 'admin' 65:     } 66: }) </pre>		
H	test/api/userApiSpec.ts (Line 85)	Review this potentially hard-coded password. Category: Authentication

<div> <div>■ Security Hotspot Code:</div> <pre> 82:         headers: jsonHeader, 83:         body: { 84:             email: ' ', &gt;&gt;&gt; 85:             password: ' ' 86:         } 87:     }) 88:     .expect('status', 201) </pre> </div>		
<div>H</div>	test/api/userApiSpec.ts (Line 103)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 100:        headers: jsonHeader, 101:        body: { 102:            email: ' ', &gt;&gt;&gt; 103:            password: ' ' 104:        } 105:    }).post(`\${API_URL}/Users`, { 106:        headers: jsonHeader, </pre> </div>		
<div>H</div>	test/api/userApiSpec.ts (Line 109)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 106:        headers: jsonHeader, 107:        body: { 108:            email: ' ', &gt;&gt;&gt; 109:            password: ' ' 110:        } 111:    }) 112:    .expect('status', 400) </pre> </div>		
<div>H</div>	test/api/userApiSpec.ts (Line 121)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 118:        headers: jsonHeader, 119:        body: { 120:            email: ' test@gmail.com', &gt;&gt;&gt; 121:            password: ' test' 122:        } 123:    }) 124:    .expect('status', 201) </pre> </div>		
<div>H</div>	test/api/userApiSpec.ts (Line 139)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 136:     headers: jsonHeader, 137:     body: { 138:         email: 'horst3@horstma.nn', &gt;&gt;&gt; 139:         password: 'hooooorst', 140:         role: 'deluxe' 141:     } 142: }) </pre>		
H	test/api/userApiSpec.ts (Line 161)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 158:     headers: jsonHeader, 159:     body: { 160:         email: 'horst4@horstma.nn', &gt;&gt;&gt; 161:         password: 'hooooorst', 162:         role: 'accounting' 163:     } 164: }) </pre>		
H	test/api/userApiSpec.ts (Line 183)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 180:     headers: jsonHeader, 181:     body: { 182:         email: 'horst5@horstma.nn', &gt;&gt;&gt; 183:         password: 'hooooorst', 184:         role: 'accountinguser' 185:     } 186: }) </pre>		
H	test/api/userApiSpec.ts (Line 202)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 199:     headers: jsonHeader, 200:     body: { 201:         email: '&lt;iframe src="javascript:alert(`xss`)"&gt;', &gt;&gt;&gt; 202:         password: 'does.not.matter' 203:     } 204: }) 205: .expect('status', 201) </pre>		
H	test/api/userApiSpec.ts (Line 256)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 253:     headers: jsonHeader, 254:     body: { 255:         email: 'bjoern.kimminich@gmail.com', &gt;&gt;&gt; 256:         password: 'bW9jLmxpYWlnQGhjaW5pbWlpay5ucmVvamI=' 257:     } 258: }) 259:     .expect('status', 200) </pre>		
<div>H</div>	test/api/userProfileSpec.ts (Line 19)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 16:     headers: jsonHeader, 17:     body: { 18:         email: 'jim@juice-sh.op', &gt;&gt;&gt; 19:         password: 'ncc-1701' 20:     } 21: }) 22:     .expect('status', 200) </pre>		
<div>H</div>	test/api/walletApiSpec.ts (Line 18)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 15:     headers: jsonHeader, 16:     body: { 17:         email: 'demo', &gt;&gt;&gt; 18:         password: 'demo' 19:     } 20: }) 21:     .expect('status', 200) </pre>		
<div>H</div>	test/cypress/e2e/administration.spec.ts (Line 5)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 2:   beforeEach(() =&gt; { 3:     cy.login({ 4:       email: 'admin', &gt;&gt;&gt; 5:       password: 'admin123' 6:     }) 7:   }) 8:   describe('challenge "adminSection"', () =&gt; { </pre>		
<div>H</div>	test/cypress/e2e/b2bOrder.spec.ts (Line 6)	Review this potentially hard-coded password. Category: Authentication

	<p>■ <b>Security Hotspot Code:</b></p> <pre> 3:      it('an infinite loop deserialization payload should not bring down the server', () =&gt; { 4:          cy.task('isDocker').then((isDocker) =&gt; { 5:              if (!isDocker) { &gt;&gt;&gt; 6:                  cy.login({ email: 'admin', password: 'admin123' }) 7: 8:                  cy.window().then(async () =&gt; { 9:                      const response = await fetch( </pre>	
<div>H</div>	test/cypress/e2e/b2bOrder.spec.ts (Line 37)	Review this potentially hard-coded password. Category: Authentication
	<p>■ <b>Security Hotspot Code:</b></p> <pre> 34:      it('should be possible to cause request timeout using a recursive regular expression payload', () =&gt; { 35:          cy.task('isDocker').then((isDocker) =&gt; { 36:              if (!isDocker) { &gt;&gt;&gt; 37:                  cy.login({ email: 'admin', password: 'admin123' }) 38:                  cy.window().then(async () =&gt; { 39:                      const response = await fetch( 40:                          `\${Cypress.config('baseUrl')}/b2b/v2/orders/`, </pre>	
<div>H</div>	test/cypress/e2e/basket.spec.ts (Line 4)	Review this potentially hard-coded password. Category: Authentication
	<p>■ <b>Security Hotspot Code:</b></p> <pre> 1: describe('/#/basket', () =&gt; { 2:     describe('as admin', () =&gt; { 3:         beforeEach(() =&gt; { &gt;&gt;&gt; 4:             cy.login({ email: 'admin', password: 'admin123' }) 5:         }) 6: 7:         describe('challenge "negativeOrder"', () =&gt; { </pre>	
<div>H</div>	test/cypress/e2e/basket.spec.ts (Line 76)	Review this potentially hard-coded password. Category: Authentication
	<p>■ <b>Security Hotspot Code:</b></p> <pre> 73: 74: describe('as jim', () =&gt; { 75:     beforeEach(() =&gt; { &gt;&gt;&gt; 76:         cy.login({ email: 'jim', password: 'ncc-1701' }) 77:     }) 78:     describe('challenge "manipulateClock"', () =&gt; { 79:         it('should be possible to enter WMNSDY2019 coupon &amp; place order with this expired coupon', () =&gt; { </pre>	
<div>H</div>	test/cypress/e2e/changePassword.s pec.ts (Line 6)	Review this potentially hard-coded password. Category: Authentication



<p>■ <b>Security Hotspot Code:</b></p> <pre> 3:   beforeEach(() =&gt; { 4:     cy.login({ 5:       email: 'morty', &gt;&gt;&gt; 6:       password: 'focusOnScienceMorty!focusOnScience' 7:     }) 8:     cy.visit('/#/privacy-security/change-password') 9:   }) </pre>		
<div>H</div>	test/cypress/e2e/changePassword.spec.ts (Line 25)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 22:   it('should be able to change password via XSS-powered attack on password change without passing current password', () =&gt; { 23:     cy.login({ 24:       email: 'bender', &gt;&gt;&gt; 25:       password: 'OhG0dPleaseInsertLiquor!' 26:     }) 27:     cy.visit( 28:       '/#/search?q=%3Ciframe%20src%3D%22javascript%3Axmlhttp%20%3D%20new%20XMLHttpRequest%28%29%3B%20xmlhttp.open%28%27GET%27%2C%20%27http%3A%2F%2Flocalhost%3A3000%2Frest%2Fuser%2Fchange-password%3Fnew%3DslurmCl4ssic%26amp%3Brepeat%3DslurmCl4ssic%27%29%3B%20xmlhttp.setRequestHeader%28%27Authorization%27%2C%60Bearer%3D%24%7BlocalStorage.getItem%28%27token%27%29%7D%60%29%3B%20xmlhttp.send%28%29%3B%22%3E' </pre>		
<div>H</div>	test/cypress/e2e/changePassword.spec.ts (Line 31)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 28:   '/#/search?q=%3Ciframe%20src%3D%22javascript%3Axmlhttp%20%3D%20new%20XMLHttpRequest%28%29%3B%20xmlhttp.open%28%27GET%27%2C%20%27http%3A%2F%2Flocalhost%3A3000%2Frest%2Fuser%2Fchange-password%3Fnew%3DslurmCl4ssic%26amp%3Brepeat%3DslurmCl4ssic%27%29%3B%20xmlhttp.setRequestHeader%28%27Authorization%27%2C%60Bearer%3D%24%7BlocalStorage.getItem%28%27token%27%29%7D%60%29%3B%20xmlhttp.send%28%29%3B%22%3E' 29:   ) 30:   cy.wait(2000) &gt;&gt;&gt; 31:   cy.login({ email: 'bender', password: 'slurmCl4ssic' }) 32:   cy.url().should('match', /\//search/) 33: 34:   cy.expectChallengeSolved({ challenge: "Change Bender's Password" }) </pre>		
<div>H</div>	test/cypress/e2e/chatbot.spec.ts (Line 3)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 1: describe('/chatbot', () =&gt; { 2:   beforeEach(() =&gt; { &gt;&gt;&gt; 3:     cy.login({ email: 'admin', password: 'admin123' }) 4:   }) 5: 6:   describe('challenge "killChatbot"', () =&gt; { </pre>		

<div>H</div>	test/cypress/e2e/complain.spec.ts (Line 5)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 2:   beforeEach(() =&gt; { 3:     cy.login({ 4:       email: 'admin', &gt;&gt;&gt; 5:       password: 'admin123' 6:     }) 7: 8:     cy.visit('/#/complain') </pre> </div>		
<div>H</div>	test/cypress/e2e/contact.spec.ts (Line 11)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 8: 9:   describe('challenge "forgedFeedback"', () =&gt; { 10:    beforeEach(() =&gt; { &gt;&gt;&gt; 11:      cy.login({ email: 'admin', password: 'admin123' }) 12:      cy.visit('/#/contact') 13:      solveNextCaptcha() 14:    }) </pre> </div>		
<div>H</div>	test/cypress/e2e/contact.spec.ts (Line 47)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 44: 45:   describe('challenge "persistedXssFeedback"', () =&gt; { 46:     beforeEach(() =&gt; { &gt;&gt;&gt; 47:       cy.login({ email: 'admin', password: 'admin123' }) 48:       cy.visit('/#/contact') 49:       solveNextCaptcha() 50:     }) </pre> </div>		
<div>H</div>	test/cypress/e2e/dataErasure.spec.ts (Line 3)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 1: describe('/dataaerasure', () =&gt; { 2:   beforeEach(() =&gt; { &gt;&gt;&gt; 3:     cy.login({ email: 'admin', password: 'admin123' }) 4:   }) 5: 6:   describe('challenge "lfr"', () =&gt; { </pre> </div>		
<div>H</div>	test/cypress/e2e/dataExport.spec.ts (Line 24)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 21:     }) 22: 23:     it('should be possible to steal admin user data by causing email clash during export', () =&gt; { &gt;&gt;&gt; 24:         cy.login({ email: 'admun', password: 'admun123' }) 25: 26:         cy.visit('/#/privacy-security/data-export') 27:         cy.get('#formatControl').contains('JSON').click() </pre>		
<div>H</div>	test/cypress/e2e/deluxe.spec.ts (Line 4)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 1: describe('/#/deluxe-membership', () =&gt; { 2:   describe('challenge "svgInjection"', () =&gt; { 3:     it('should be possible to pass in a forgotten test parameter abusing the redirect-endpoint to load an external image', () =&gt; { &gt;&gt;&gt; 4:         cy.login({ email: 'jim', password: 'ncc-1701' }) 5:         cy.location().then((loc) =&gt; { 6:           cy.visit( 7:             `/#/deluxe-membership?testDecal=\${encodeURIComponent( </pre>		
<div>H</div>	test/cypress/e2e/deluxe.spec.ts (Line 21)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 18:     it('should upgrade to deluxe for free by making a post request to /rest/deluxe-membership by setting the paymentMode parameter to null', () =&gt; { 19:         cy.login({ 20:           email: 'jim', &gt;&gt;&gt; 21:           password: 'ncc-1701' 22:         }) 23:         cy.visit('/#/') 24:         cy.getCookie('token').then((token) =&gt; { </pre>		
<div>H</div>	test/cypress/e2e/noSql.spec.ts (Line 8)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 5: 6:   describe('challenge "NoSQL DoS"', () =&gt; { 7:     beforeEach(() =&gt; { &gt;&gt;&gt; 8:         cy.login({ email: 'admin', password: 'admin123' }) 9:       }) 10:     it('should be possible to inject a command into the get route', () =&gt; { 11:       cy.task('isDocker').then((isDocker) =&gt; { </pre>		
<div>H</div>	test/cypress/e2e/noSql.spec.ts (Line 53)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 50: 51:   describe('challenge "NoSQL Manipulation"', () =&gt; { 52:     beforeEach(() =&gt; { &gt;&gt;&gt; 53:       cy.login({ email: 'admin', password: 'admin123' }) 54:     }) 55: 56:     it('should be possible to inject a selector into the update route', () =&gt; { </pre>		
H	test/cypress/e2e/noSql.spec.ts (Line 76)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 73: 74:   describe('challenge "Forged Review"', () =&gt; { 75:     beforeEach(() =&gt; { &gt;&gt;&gt; 76:       cy.login({ email: 'mc.safesearch', password: 'Mr. N00dles' }) 77:     }) 78: 79:     it('should be possible to edit any existing review', () =&gt; { </pre>		
H	test/cypress/e2e/noSql.spec.ts (Line 120)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 117: 118:   describe('challenge "Multiple Likes"', () =&gt; { 119:     beforeEach(() =&gt; { &gt;&gt;&gt; 120:       cy.login({ email: 'mc.safesearch', password: 'Mr. N00dles' }) 121:     }) 122: 123:     it('should be possible to like reviews multiple times', () =&gt; { </pre>		
H	test/cypress/e2e/profile.spec.ts (Line 3)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 1: describe('/profile', () =&gt; { 2:   beforeEach(() =&gt; { &gt;&gt;&gt; 3:     cy.login({ email: 'admin', password: 'admin123' }) 4:   }) 5:   describe('challenge "ssrf"', () =&gt; { 6:     it('should be possible to request internal resources using image upload URL', () =&gt; { </pre>		
H	test/cypress/e2e/register.spec.ts (Line 10)	Review this potentially hard-coded password. Category: Authentication

<div> <div>■ Security Hotspot Code:</div> <pre> 7:   beforeEach(() =&gt; { 8:     cy.login({ 9:       email: 'admin', &gt;&gt;&gt; 10:       password: 'admin123' 11:     }) 12:   }) 13: </pre> </div>		
<div>H</div>	test/cypress/e2e/register.spec.ts (Line 28)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 25:           }, 26:           body: JSON.stringify({ 27:             email: '&lt;iframe src="javascript:alert(`xss`)"&gt;', &gt;&gt;&gt; 28:             password: 'XSSed', 29:             passwordRepeat: 'XSSed', 30:             role: 'admin' 31:           }) </pre> </div>		
<div>H</div>	test/cypress/e2e/register.spec.ts (Line 29)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 26:           body: JSON.stringify({ 27:             email: '&lt;iframe src="javascript:alert(`xss`)"&gt;', 28:             password: 'XSSed', &gt;&gt;&gt; 29:             passwordRepeat: 'XSSed', 30:             role: 'admin' 31:           }) 32:         } </pre> </div>		
<div>H</div>	test/cypress/e2e/register.spec.ts (Line 60)	Review this potentially hard-coded password. Category: Authentication
<div> <div>■ Security Hotspot Code:</div> <pre> 57:           }, 58:           body: JSON.stringify({ 59:             email: 'testing@test.com', &gt;&gt;&gt; 60:             password: 'pwned', 61:             passwordRepeat: 'pwned', 62:             role: 'admin' 63:           }) </pre> </div>		
<div>H</div>	test/cypress/e2e/register.spec.ts (Line 61)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 58:         body: JSON.stringify({ 59:             email: 'testing@test.com', 60:             password: 'pwned', &gt;&gt;&gt; 61:             passwordRepeat: 'pwned', 62:             role: 'admin' 63:         }) 64:     }) </pre>		
H	test/cypress/e2e/register.spec.ts (Line 84)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 81:         }, 82:         body: JSON.stringify({ 83:             email: 'uncle@bob.com', &gt;&gt;&gt; 84:             password: 'ThereCanBeOnlyOne' 85:         }) 86:     }) 87:     if (response.status === 201) { </pre>		
H	test/cypress/e2e/restApi.spec.ts (Line 4)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 1: describe('/api', () =&gt; { 2:   describe('challenge "restfulXss"', () =&gt; { 3:     beforeEach(() =&gt; { &gt;&gt;&gt; 4:       cy.login({ email: 'admin', password: 'admin123' }) 5:     }) 6: 7:     // Cypress alert bug </pre>		
H	test/cypress/e2e/restApi.spec.ts (Line 82)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 79:     beforeEach(() =&gt; { 80:       cy.login({ 81:         email: 'admin', &gt;&gt;&gt; 82:         password: 'admin123' 83:       }) 84:     }) 85: </pre>		
H	test/cypress/e2e/search.spec.ts (Line 56)	Review this potentially hard-coded password. Category: Authentication

<p>■ <b>Security Hotspot Code:</b></p> <pre> 53:   beforeEach(() =&gt; { 54:     cy.login({ 55:       email: 'admin', &gt;&gt;&gt; 56:       password: 'admin123' 57:     }) 58:   }) 59: </pre>		
H	test/cypress/e2e/search.spec.ts (Line 83)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 80:   beforeEach(() =&gt; { 81:     cy.login({ 82:       email: 'admin', &gt;&gt;&gt; 83:       password: 'admin123' 84:     }) 85:   }) 86: </pre>		
H	test/cypress/e2e/totpSetup.spec.ts (Line 6)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 3:   beforeEach(() =&gt; { 4:     cy.login({ 5:       email: 'wurstbrot', &gt;&gt;&gt; 6:       password: 'EinBelegtesBrotMitSchinkenSCHINKEN!', 7:       totpSecret: 'IFTXE3SPOEYVURT2MRYGI52TKJ4HC3KH' 8:     }) 9:   }) </pre>		
H	test/cypress/e2e/totpSetup.spec.ts (Line 20)	Review this potentially hard-coded password. Category: Authentication
<p>■ <b>Security Hotspot Code:</b></p> <pre> 17:   beforeEach(() =&gt; { 18:     cy.login({ 19:       email: 'amy', &gt;&gt;&gt; 20:       password: 'Klf.....' 21:     }) 22:   }) 23: </pre>		
H	Dockerfile (Line 38)	Make sure no write permissions are assigned to the copied resource. Category: Authentication

#### ■ Security Hotspot Code:

```

35:     org.opencontainers.image.revision=$VCS_REF \
36:     org.opencontainers.image.created=$BUILD_DATE
37: WORKDIR /juice-shop
>>> 38: COPY --from=installer --chown=65532:0 /juice-shop .
39: USER 65532
40: EXPOSE 3000
41: CMD ["/juice-shop/build/app.js"]

```

## Denial of Service (DoS) (10 hotspots)

Risk	File Path	Rule & Message
M	server.ts (Line 682)	Make sure the content length limit is safe here. Category: Denial of Service (DoS)
<h4>■ Security Hotspot Code:</h4> <pre> 679:   'image/jpeg': 'jpg', 680:   'image/jpg': 'jpg' 681: } &gt;&gt;&gt; 682: const uploadToDisk = multer({ 683:   storage: multer.diskStorage({ 684:     destination: (req: Request, file: any, cb: any) =&gt; { 685:       const isValid = mimeTypeMap[file.mimetype] </pre>		
M	frontend/src/app/change-password change-password.component.ts (Line 94)	Make sure the regex used here, which is vulnerable to super-linear runtime due to backtracking, cannot lead to denial of service. Category: Denial of Service (DoS)
<h4>■ Security Hotspot Code:</h4> <pre> 91:   if ( 92:     localStorage.getItem('email')?.match(/support@.*/) &amp;&amp; 93:     !this.newPasswordControl.value.match( &gt;&gt;&gt; 94:       /(?!.*[a-z])(?!.*[A-Z])(?!.*\d)(?!.*[@\$_!*?&amp;])[A-Za-z\d@\$_!*?&amp;]{12,30}/ 95:     ) 96:   ) { 97:     console.error( </pre>		
M	lib/codingChallenges.ts (Line 66)	Make sure the regex used here, which is vulnerable to super-linear runtime due to backtracking, cannot lead to denial of service. Category: Denial of Service (DoS)





M	routes/profileImageUrlUpload.ts (Line 20)	<p>Make sure the regex used here, which is vulnerable to super-linear runtime due to backtracking, cannot lead to denial of service.</p> <p>Category: Denial of Service (DoS)</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 17:   return async (req: Request, res: Response, next: NextFunction) =&gt; { 18:     if (req.body.imageUrl !== undefined) { 19:       const url = req.body.imageUrl &gt;&gt;&gt; 20:       if (url.match(/(.)*solve\/challenges\/server-side(.)*\/) !== null) req.app.locals.abused_ssrf_bug = true 21:       const loggedInUser = security.authenticatedUsers.get(req.cookies.token) 22:       if (loggedInUser) { 23:         try { </pre>		
M	server.ts (Line 246)	<p>Make sure the regex used here, which is vulnerable to super-linear runtime due to backtracking, cannot lead to denial of service.</p> <p>Category: Denial of Service (DoS)</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 243:   // @ts-expect-error FIXME assignment broken due to seemingly void return value 244:   res.end = function () { 245:     if (arguments.length) { &gt;&gt;&gt; 246:       const reqPath = req.originalUrl.replace(/\?.*\$/, '') 247:       // eslint-disable-next-line @typescript-eslint/no-non-null-assertion 248:       const currentFolder = reqPath.split('/').pop()! 249:       arguments[0] = arguments[0].replace(/a href="([^\"]+?)"\/gi, function (matchString: string, matchedUrl: string) { </pre>		
M	test/api/metricsApiSpec.ts (Line 18)	<p>Make sure the regex used here, which is vulnerable to super-linear runtime due to backtracking, cannot lead to denial of service.</p> <p>Category: Denial of Service (DoS)</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 15:   return frisby.get(API_URL) 16:     .expect('status', 200) 17:     .expect('header', 'content-type', /text\/plain/) &gt;&gt;&gt; 18:     .expect('bodyContains', /^.*_version_info{version="[0-9]+\.[0-9]+\.[0-9]+(-SNAPSHO T)?",major="[0-9]+",minor="[0-9]+",patch="[0-9]+",app=".*"} 1\$/gm) 19:     .expect('bodyContains', /^.*_challenges_solved{difficulty="[1-6]",category=".*",app=".*"} [0-9]*\$/gm) 20:     .expect('bodyContains', /^.*_challenges_total{difficulty="[1-6]",category=".*",app=".*"} [0-9]*\$/gm) 21:     .expect('bodyContains', /^.*_cheat_score{app=".*"} [0-9.]*\$/gm) </pre>		
M	test/cypress/support/commands.ts (Line 36)	<p>Make sure the regex used here, which is vulnerable to super-linear runtime due to backtracking, cannot lead to denial of service.</p> <p>Category: Denial of Service (DoS)</p>

#### ■ Security Hotspot Code:

```
33:   'login',
34:   (context: { email: string, password: string, totpSecret?: string }) => {
35:     cy.visit('/#/login')
>>> 36:     if (context.email.match(/\S+@\S+\.\S+/) != null) {
37:       cy.get('#email').type(context.email)
38:     } else {
39:       cy.task<string>('GetFromConfig', 'application.domain').then(
```

## Encrypt Data (42 hotspots)

Risk	File Path	Rule & Message
L	data/static/codefixes redirectChallenge_1.ts (Line 6)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<h4>■ Security Hotspot Code:</h4> <pre>3:   'https://blockchain.info/address/1AbKfgvw9psQ41NbLi8kufDQTezwG8DRZm', 4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 5:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', &gt;&gt;&gt; 6:   'http://shop.spreadshirt.com/juiceshop', 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 9:   'http://leanpub.com/juice-shop'</pre>		
L	data/static/codefixes redirectChallenge_1.ts (Line 7)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<h4>■ Security Hotspot Code:</h4> <pre>4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 5:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', 6:   'http://shop.spreadshirt.com/juiceshop', &gt;&gt;&gt; 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 9:   'http://leanpub.com/juice-shop' 10: ])</pre>		
L	data/static/codefixes redirectChallenge_1.ts (Line 9)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<h4>■ Security Hotspot Code:</h4> <pre>6:   'http://shop.spreadshirt.com/juiceshop', 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', &gt;&gt;&gt; 9:   'http://leanpub.com/juice-shop' 10: ])</pre> <pre>11: 12: export const isRedirectAllowed = (url: string) =&gt; {</pre>		

L	data/static/codefixes redirectChallenge_2.ts (Line 6)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 3:   'https://blockchain.info/address/1AbKfgvw9psQ41NbLi8kufDQTezwG8DRZm', 4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 5:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', &gt;&gt;&gt; 6:   'http://shop.spreadshirt.com/juiceshop', 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 9:   'http://leanpub.com/juice-shop' </pre> </div>		
L	data/static/codefixes redirectChallenge_2.ts (Line 7)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 5:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', 6:   'http://shop.spreadshirt.com/juiceshop', &gt;&gt;&gt; 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 9:   'http://leanpub.com/juice-shop' 10: ]} </pre> </div>		
L	data/static/codefixes redirectChallenge_2.ts (Line 9)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 6:   'http://shop.spreadshirt.com/juiceshop', 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', &gt;&gt;&gt; 9:   'http://leanpub.com/juice-shop' 10: ]} 11: 12: export const isRedirectAllowed = (url: string) =&gt; { </pre> </div>		
L	data/static/codefixes redirectChallenge_3.ts (Line 6)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 3:   'https://blockchain.info/address/1AbKfgvw9psQ41NbLi8kufDQTezwG8DRZm', 4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 5:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', &gt;&gt;&gt; 6:   'http://shop.spreadshirt.com/juiceshop', 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 9:   'http://leanpub.com/juice-shop' </pre> </div>		
L	data/static/codefixes redirectChallenge_3.ts (Line 7)	Using http protocol is insecure. Use https instead. Category: Encrypt Data

<p>■ <b>Security Hotspot Code:</b></p> <pre> 4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 5:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', 6:   'http://shop.spreadshirt.com/juiceshop', &gt;&gt;&gt; 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 9:   'http://leanpub.com/juice-shop' 10: ])</pre>		
L	data/static/codefixes redirectChallenge_3.ts (Line 9)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 6:   'http://shop.spreadshirt.com/juiceshop', 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', &gt;&gt;&gt; 9:   'http://leanpub.com/juice-shop' 10: ])</pre> <pre> 11: 12: export const isRedirectAllowed = (url: string) =&gt; {</pre>		
L	data/static/codefixes redirectChallenge_4_correct.ts (Line 6)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 3:   'https://blockchain.info/address/1AbKfgv9psQ41NbLi8kufDQTezwG8DRZm', 4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 5:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', &gt;&gt;&gt; 6:   'http://shop.spreadshirt.com/juiceshop', 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 9:   'http://leanpub.com/juice-shop'</pre>		
L	data/static/codefixes redirectChallenge_4_correct.ts (Line 7)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 5:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', 6:   'http://shop.spreadshirt.com/juiceshop', &gt;&gt;&gt; 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 9:   'http://leanpub.com/juice-shop' 10: ])</pre>		
L	data/static/codefixes redirectChallenge_4_correct.ts (Line 9)	Using http protocol is insecure. Use https instead. Category: Encrypt Data

<div>■ Security Hotspot Code:</div> <pre>6:   'http://shop.spreadshirt.com/juiceshop', 7:   'http://shop.spreadshirt.de/juiceshop', 8:   'https://www.stickeryou.com/products/owasp-juice-shop/794', &gt;&gt;&gt; 9:   'http://leanpub.com/juice-shop' 10:  ])</pre> <pre>11: 12: export const isRedirectAllowed = (url: string) =&gt; {</pre>		
<div>L</div>	<div>data/static/codefixes redirectCryptoCurrencyChallenge_1.ts (Line 5)</div>	<div>Using http protocol is insecure. Use https instead.</div> <div>Category: Encrypt Data</div>
<div>■ Security Hotspot Code:</div> <pre>2:   'https://github.com/juice-shop/juice-shop', 3:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 4:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', &gt;&gt;&gt; 5:   'http://shop.spreadshirt.com/juiceshop', 6:   'http://shop.spreadshirt.de/juiceshop', 7:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 8:   'http://leanpub.com/juice-shop'</pre>		
<div>L</div>	<div>data/static/codefixes redirectCryptoCurrencyChallenge_1.ts (Line 6)</div>	<div>Using http protocol is insecure. Use https instead.</div> <div>Category: Encrypt Data</div>
<div>■ Security Hotspot Code:</div> <pre>3:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 4:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', 5:   'http://shop.spreadshirt.com/juiceshop', &gt;&gt;&gt; 6:   'http://shop.spreadshirt.de/juiceshop', 7:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 8:   'http://leanpub.com/juice-shop' 9:  ])</pre>		
<div>L</div>	<div>data/static/codefixes redirectCryptoCurrencyChallenge_1.ts (Line 8)</div>	<div>Using http protocol is insecure. Use https instead.</div> <div>Category: Encrypt Data</div>
<div>■ Security Hotspot Code:</div> <pre>5:   'http://shop.spreadshirt.com/juiceshop', 6:   'http://shop.spreadshirt.de/juiceshop', 7:   'https://www.stickeryou.com/products/owasp-juice-shop/794', &gt;&gt;&gt; 8:   'http://leanpub.com/juice-shop' 9:  ])</pre> <pre>10: 11: export const isRedirectAllowed = (url: string) =&gt; {</pre>		
<div>L</div>	<div>data/static/codefixes redirectCryptoCurrencyChallenge_2.ts (Line 5)</div>	<div>Using http protocol is insecure. Use https instead.</div> <div>Category: Encrypt Data</div>

<div>■ Security Hotspot Code:</div> <pre>2:   'https://github.com/juice-shop/juice-shop', 3:   'https://blockchain.info/address/1AbKfgvw9psQ41NbLi8kufDQTezwG8DRZm', 4:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', &gt;&gt;&gt; 5:   'http://shop.spreadshirt.com/juiceshop', 6:   'http://shop.spreadshirt.de/juiceshop', 7:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 8:   'http://leanpub.com/juice-shop'</pre>		
<div>L</div>	<div>data/static/codefixes redirectCryptoCurrencyChallenge_2.ts (Line 6)</div>	<div>Using http protocol is insecure. Use https instead.</div> <div>Category: Encrypt Data</div>
<div>■ Security Hotspot Code:</div> <pre>3:   'https://blockchain.info/address/1AbKfgvw9psQ41NbLi8kufDQTezwG8DRZm', 4:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', 5:   'http://shop.spreadshirt.com/juiceshop', &gt;&gt;&gt; 6:   'http://shop.spreadshirt.de/juiceshop', 7:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 8:   'http://leanpub.com/juice-shop' 9: ])</pre>		
<div>L</div>	<div>data/static/codefixes redirectCryptoCurrencyChallenge_2.ts (Line 8)</div>	<div>Using http protocol is insecure. Use https instead.</div> <div>Category: Encrypt Data</div>
<div>■ Security Hotspot Code:</div> <pre>5:   'http://shop.spreadshirt.com/juiceshop', 6:   'http://shop.spreadshirt.de/juiceshop', 7:   'https://www.stickeryou.com/products/owasp-juice-shop/794', &gt;&gt;&gt; 8:   'http://leanpub.com/juice-shop' 9: ])</pre> <pre>10: 11: export const isRedirectAllowed = (url: string) =&gt; {</pre>		
<div>L</div>	<div>data/static/codefixes redirectCryptoCurrencyChallenge_3_correct.ts (Line 3)</div>	<div>Using http protocol is insecure. Use https instead.</div> <div>Category: Encrypt Data</div>
<div>■ Security Hotspot Code:</div> <pre>1: export const redirectAllowlist = new Set([ 2:   'https://github.com/juice-shop/juice-shop', &gt;&gt;&gt; 3:   'http://shop.spreadshirt.com/juiceshop', 4:   'http://shop.spreadshirt.de/juiceshop', 5:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 6:   'http://leanpub.com/juice-shop'</pre>		
<div>L</div>	<div>data/static/codefixes redirectCryptoCurrencyChallenge_3_correct.ts (Line 4)</div>	<div>Using http protocol is insecure. Use https instead.</div> <div>Category: Encrypt Data</div>

<div>■ Security Hotspot Code:</div> <pre>1: export const redirectAllowlist = new Set([ 2:   'https://github.com/juice-shop/juice-shop', 3:   'http://shop.spreadshirt.com/juiceshop', &gt;&gt;&gt; 4:   'http://shop.spreadshirt.de/juiceshop', 5:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 6:   'http://leanpub.com/juice-shop' 7: ])</pre>		
L	data/static/codefixes redirectCryptoCurrencyChallenge_3 _correct.ts (Line 6)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div>■ Security Hotspot Code:</div> <pre>3:   'http://shop.spreadshirt.com/juiceshop', 4:   'http://shop.spreadshirt.de/juiceshop', 5:   'https://www.stickeryou.com/products/owasp-juice-shop/794', &gt;&gt;&gt; 6:   'http://leanpub.com/juice-shop' 7: ])</pre> <pre>8: 9: export const isRedirectAllowed = (url: string) =&gt; {</pre>		
L	data/static/codefixes redirectCryptoCurrencyChallenge_4 .ts (Line 5)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div>■ Security Hotspot Code:</div> <pre>2:   'https://github.com/juice-shop/juice-shop', 3:   'https://blockchain.info/address/1AbKfgvw9psQ41NbLi8kufDQTezwG8DRZm', 4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', &gt;&gt;&gt; 5:   'http://shop.spreadshirt.com/juiceshop', 6:   'http://shop.spreadshirt.de/juiceshop', 7:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 8:   'http://leanpub.com/juice-shop'</pre>		
L	data/static/codefixes redirectCryptoCurrencyChallenge_4 .ts (Line 6)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div>■ Security Hotspot Code:</div> <pre>3:   'https://blockchain.info/address/1AbKfgvw9psQ41NbLi8kufDQTezwG8DRZm', 4:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', 5:   'http://shop.spreadshirt.com/juiceshop', &gt;&gt;&gt; 6:   'http://shop.spreadshirt.de/juiceshop', 7:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 8:   'http://leanpub.com/juice-shop' 9: ])</pre>		
L	data/static/codefixes redirectCryptoCurrencyChallenge_4 .ts (Line 8)	Using http protocol is insecure. Use https instead. Category: Encrypt Data



<p>■ <b>Security Hotspot Code:</b></p> <pre> 5:   'http://shop.spreadshirt.com/juiceshop', 6:   'http://shop.spreadshirt.de/juiceshop', 7:   'https://www.stickeryou.com/products/owasp-juice-shop/794', &gt;&gt;&gt; 8:   'http://leanpub.com/juice-shop' 9:   ]) 10: 11: export const isRedirectAllowed = (url: string) =&gt; { </pre>		
L	frontend/src/app/order-completion order-completion.component.spec.ts (Line 136)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 133: 134:   it('should use configured URL as is if it is not a twitter URL', () =&gt; { 135:     trackOrderService.find.and.returnValue(of({ data: [{ products: [] }] })) &gt;&gt;&gt; 136:     configurationService.getApplicationConfiguration.and.returnValue(of({ application: { social: { twitterUrl: 'http://localhost:42' } } })) 137:     component.ngOnInit() 138:     expect(component.tweetText).toBe('I just purchased%0afrom http://localhost:42') 139:   }) </pre>		
L	lib/insecurity.ts (Line 129)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 126:   'https://blockchain.info/address/1AbKfgvw9psQ41NbLi8kufDQTezwG8DRZm', // vuln-code-snippet vuln-line redirectCryptoCurrencyChallenge 127:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', // vuln-code-snippet vuln-line redirectCryptoCurrencyChallenge 128:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', // vuln-code-snippet vuln-line redirectCryptoCurrencyChallenge &gt;&gt;&gt; 129:   'http://shop.spreadshirt.com/juiceshop', 130:   'http://shop.spreadshirt.de/juiceshop', 131:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 132:   'http://leanpub.com/juice-shop' </pre>		
L	lib/insecurity.ts (Line 130)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 127:   'https://explorer.dash.org/address/Xr556RzuwX6hg5EGpkybbv5RanJoZN17kW', // vuln-code-snippet vuln-line redirectCryptoCurrencyChallenge 128:   'https://etherscan.io/address/0x0f933ab9fcaaa782d0279c300d73750e1311eae6', // vuln-code-snippet vuln-line redirectCryptoCurrencyChallenge 129:   'http://shop.spreadshirt.com/juiceshop', &gt;&gt;&gt; 130:   'http://shop.spreadshirt.de/juiceshop', 131:   'https://www.stickeryou.com/products/owasp-juice-shop/794', 132:   'http://leanpub.com/juice-shop' 133:   ]) </pre>		

<div>L</div>	lib/insecurity.ts (Line 132)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 129:   'http://shop.spreadshirt.com/juiceshop', 130:   'http://shop.spreadshirt.de/juiceshop', 131:   'https://www.stickeryou.com/products/owasp-juice-shop/794', &gt;&gt;&gt; 132:   'http://leanpub.com/juice-shop' 133: ]) 134: 135: export const isRedirectAllowed = (url: string) =&gt; { </pre> </div>		
<div>L</div>	test/cypress/e2e/profile.spec.ts (Line 74)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 71:   describe('challenge "csrf"', () =&gt; { 72:     // FIXME Only works on Chrome &lt;80 but Protractor uses latest Chrome version. Test can probably never be turned on again. 73:     xit('should be possible to perform a CSRF attack against the user profile page', () =&gt; { &gt;&gt;&gt; 74:       cy.visit('http://htmledit.squarefree.com') 75:       /* The script executed below is equivalent to pasting this string into http://htmledit.squarefree.com: */ 76:       /* &lt;form action="http://localhost:3000/profile" method="POST"&gt;&lt;input type="hidden" name="username" value="CSRF"/&gt;&lt;input type="submit"/&gt;&lt;/form&gt;&lt;script&gt;document.forms[0].submit();&lt;/script&gt; */ 77:       let document: any </pre> </div>		
<div>L</div>	test/cypress/e2e/profile.spec.ts (Line 107)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 104:       headers: { 105:         'Content-type': 'application/x-www-form-urlencoded', 106:         Authorization: `Bearer \${localStorage.getItem('token')}`, &gt;&gt;&gt; 107:         Origin: 'http://htmledit.squarefree.com', // FIXME Not allowed by browser due to "unsafe header not permitted" 108:         Cookie: `token=\${localStorage.getItem('token')}` // FIXME Not allowed by browser due to "unsafe header not permitted" 109:       }, 110:       body: formData </pre> </div>		
<div>L</div>	test/server/redirectSpec.ts (Line 45)	Using http protocol is insecure. Use https instead. Category: Encrypt Data

<p>■ <b>Security Hotspot Code:</b></p> <pre> 42:   }) 43: 44:   it('should raise error for URL not on allowlist', () =&gt; { &gt;&gt;&gt; 45:     req.query.to = 'http://kimminich.de' 46: 47:     performRedirect()(req, res, next) 48: </pre>		
L	test/server/redirectSpec.ts (Line 81)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 78:   }) 79: 80:   it('tricking the allowlist should solve "redirectChallenge"', () =&gt; { &gt;&gt;&gt; 81:     req.query.to = 'http://kimminich.de?to=https://github.com/juice-shop/juice-shop' 82:     challenges.redirectChallenge = { solved: false, save } as unknown as Challenge 83: 84:     performRedirect()(req, res, next) </pre>		
L	test/server/utlilsSpec.ts (Line 38)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 35:   }) 36: 37:   it('returns filename from http:// URL', () =&gt; { &gt;&gt;&gt; 38:     expect(utlils.extractFilename('http://bla.blubb/test.exe')).to.equal('test.exe') 39:   }) 40: 41:   it('ignores query part of http:// URL', () =&gt; { </pre>		
L	test/server/utlilsSpec.ts (Line 42)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 39:   }) 40: 41:   it('ignores query part of http:// URL', () =&gt; { &gt;&gt;&gt; 42:     expect(utlils.extractFilename('http://bla.blubb/test.exe?bla=blubb&amp;a=b')).to.equal('test.exe') 43:   }) 44: 45:   it('also works for file:// URLs', () =&gt; { </pre>		
L	test/server/verifySpec.ts (Line 88)	Using http protocol is insecure. Use https instead. Category: Encrypt Data

<p>■ <b>Security Hotspot Code:</b></p> <pre> 85:   describe('accessControlChallenges', () =&gt; { 86:     it('"scoreBoardChallenge" is solved when the lpx.png transpixel is requested', () =&gt; { 87:       challenges.scoreBoardChallenge = { solved: false, save } as unknown as Challenge &gt;&gt;&gt; 88:       req.url = 'http://juice-sh.op/public/images/padding/lpx.png' 89: 90:       verify.accessControlChallenges()(req, res, next) 91: </pre>		
L	test/server/verifySpec.ts (Line 97)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 94: 95:   it('"adminSectionChallenge" is solved when the 19px.png transpixel is requested', () =&gt; { 96:     challenges.adminSectionChallenge = { solved: false, save } as unknown as Challenge &gt;&gt;&gt; 97:     req.url = 'http://juice-sh.op/public/images/padding/19px.png' 98: 99:     verify.accessControlChallenges()(req, res, next) 100: </pre>		
L	test/server/verifySpec.ts (Line 106)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 103: 104:   it('"tokenSaleChallenge" is solved when the 56px.png transpixel is requested', () =&gt; { 105:     challenges.tokenSaleChallenge = { solved: false, save } as unknown as Challenge &gt;&gt;&gt; 106:     req.url = 'http://juice-sh.op/public/images/padding/56px.png' 107: 108:     verify.accessControlChallenges()(req, res, next) 109: </pre>		
L	test/server/verifySpec.ts (Line 115)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<p>■ <b>Security Hotspot Code:</b></p> <pre> 112: 113:   it('"extraLanguageChallenge" is solved when the Klingon translation file is requested', () =&gt; { 114:     challenges.extraLanguageChallenge = { solved: false, save } as unknown as Challenge &gt;&gt;&gt; 115:     req.url = 'http://juice-sh.op/public/i18n/tlh_AA.json' 116: 117:     verify.accessControlChallenges()(req, res, next) 118: </pre>		

L	test/server/verifySpec.ts (Line 125)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 122:     it('"retrieveBlueprintChallenge" is solved when the blueprint file is requested', () =&gt; { 123:         challenges.retrieveBlueprintChallenge = { solved: false, save } as unknown as Challenge 124:         setRetrieveBlueprintChallengeFile('test.dxf') &gt;&gt;&gt; 125:         req.url = 'http://juice-sh.op/public/images/products/test.dxf' 126: 127:         verify.accessControlChallenges()(req, res, next) 128: </pre> </div>		
L	test/server/verifySpec.ts (Line 134)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 131: 132:     it('"missingEncodingChallenge" is solved when the crazy cat photo is requested', () =&gt; { 133:         challenges.missingEncodingChallenge = { solved: false, save } as unknown as Challenge &gt;&gt;&gt; 134:         req.url = 'http://juice-sh.op/public/images/uploads/%E1%93%9A%E1%98%8F%E1%97%A2- %23zatschi-%23whoneedsfourlegs-1572600969477.jpg' 135: 136:         verify.accessControlChallenges()(req, res, next) 137: </pre> </div>		
L	test/server/verifySpec.ts (Line 143)	Using http protocol is insecure. Use https instead. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 140: 141:     it('"accessLogDisclosureChallenge" is solved when any server access log file is requested', () =&gt; { 142:         challenges.accessLogDisclosureChallenge = { solved: false, save } as unknown as Challenge &gt;&gt;&gt; 143:         req.url = 'http://juice-sh.op/support/logs/access.log.2019-01-15' 144: 145:         verify.accessControlChallenges()(req, res, next) 146: </pre> </div>		
L	test/smoke/Dockerfile (Line 7)	Make sure that using clear-text protocols is safe here. Category: Encrypt Data
<div> <div>■ Security Hotspot Code:</div> <pre> 4: 5: COPY smoke-test.sh smoke-test.sh 6: &gt;&gt;&gt; 7: CMD ["sh", "smoke-test.sh", "http://app:3000"] </pre> </div>		

## Insecure Configuration (2 hotspots)

Risk	File Path	Rule & Message
L	server.ts (Line 182)	Make sure that enabling CORS is safe here. Category: Insecure Configuration
<b>■ Security Hotspot Code:</b> <pre> 179: 180:  /* Bludgeon solution for possible CORS problems: Allow everything! */ 181:  app.options('*', cors()) &gt;&gt;&gt; 182:  app.use(cors()) 183: 184:  /* Security middleware */ 185:  app.use(helmet.noSniff()) </pre>		
L	server.ts (Line 671)	Make sure this debug feature is deactivated before delivering the code in production. Category: Insecure Configuration
<b>■ Security Hotspot Code:</b> <pre> 668: 669:  /* Error Handling */ 670:  app.use(verify.errorHandlingChallenge()) &gt;&gt;&gt; 671:  app.use(errorhandler()) 672:  }).catch((err) =&gt; { 673:    console.error(err) 674:  }) </pre>		

## Others (14 hotspots)

Risk	File Path	Rule & Message
L	lib/insecurity.ts (Line 43)	Make sure this weak hash algorithm is not used in a sensitive context here. Category: Others

<p>■ <b>Security Hotspot Code:</b></p> <pre> 40:   updateFrom: (req: Request, user: ResponseWithUser) =&gt; any 41: } 42: &gt;&gt;&gt; 43: export const hash = (data: string) =&gt; crypto.createHash('md5').update(data).digest('hex') 44: export const hmac = (data: string) =&gt; crypto.createHmac('sha256', 'pa4qacea4VK9t9nGv7yZtwmj').update(data).digest('hex') 45: 46: export const cutOffPoisonNullByte = (str: string) =&gt; { </pre>		
L	frontend/src/index.html (Line 15)	Make sure not using resource integrity feature is safe here. Category: Others
<p>■ <b>Security Hotspot Code:</b></p> <pre> 12:   &lt;meta name="viewport" content="width=device-width, initial-scale=1"&gt; 13:   &lt;link id="favicon" rel="icon" type="image/x-icon" href="assets/public/favicon_js.ico"&gt; 14:   &lt;link rel="stylesheet" type="text/css" href="//cdnjs.cloudflare.com/ajax/libs/cookieconsent2/3.1.0/cookieconsent.min.css" /&gt; &gt;&gt;&gt; 15:   &lt;script src="//cdnjs.cloudflare.com/ajax/libs/cookieconsent2/3.1.0/cookieconsent.min.js"&gt;&lt;/script&gt; 16:   &lt;script src="//cdnjs.cloudflare.com/ajax/libs/jquery/2.2.4/jquery.min.js"&gt;&lt;/script&gt; 17:   &lt;script&gt; 18:     window.addEventListener("load", function(){ </pre>		
L	frontend/src/index.html (Line 16)	Make sure not using resource integrity feature is safe here. Category: Others
<p>■ <b>Security Hotspot Code:</b></p> <pre> 13:   &lt;link id="favicon" rel="icon" type="image/x-icon" href="assets/public/favicon_js.ico"&gt; 14:   &lt;link rel="stylesheet" type="text/css" href="//cdnjs.cloudflare.com/ajax/libs/cookieconsent2/3.1.0/cookieconsent.min.css" /&gt; 15:   &lt;script src="//cdnjs.cloudflare.com/ajax/libs/cookieconsent2/3.1.0/cookieconsent.min.js"&gt;&lt;/script&gt; &gt;&gt;&gt; 16:   &lt;script src="//cdnjs.cloudflare.com/ajax/libs/jquery/2.2.4/jquery.min.js"&gt;&lt;/script&gt; 17:   &lt;script&gt; 18:     window.addEventListener("load", function(){ 19:       window.cookieconsent.initialise({ </pre>		
L	test/api/loginApiSpec.ts (Line 253)	Make sure using a hardcoded IP address 1.2.3.4 is safe here. Category: Others
<p>■ <b>Security Hotspot Code:</b></p> <pre> 250:     return frisby.get(REST_URL + '/saveLoginIp', { 251:       headers: { 252:         Authorization: 'Bearer ' + jsonLogin.authentication.token, &gt;&gt;&gt; 253:         'true-client-ip': '1.2.3.4' 254:       } 255:     }) 256:     .expect('status', 200) </pre>		

L	test/api/loginApiSpec.ts (Line 257)	Make sure using a hardcoded IP address 1.2.3.4 is safe here. Category: Others
<div> <div>■ Security Hotspot Code:</div> <pre> 254:         } 255:     }) 256:         .expect('status', 200) &gt;&gt;&gt; 257:         .expect('json', { lastLoginIp: '1.2.3.4' }) 258:     }) 259: }) 260: </pre> </div>		
L	test/server/utisSpec.ts (Line 16)	Make sure using a hardcoded IP address 2001:0db8:85a3:0000:0000:8a2e:0370:7334 is safe here. Category: Others
<div> <div>■ Security Hotspot Code:</div> <pre> 13: describe('utils', () =&gt; { 14:   describe('toSimpleIpAddress', () =&gt; { 15:     it('returns ipv6 address unchanged', () =&gt; { &gt;&gt;&gt; 16:       expect(utils.toSimpleIpAddress('2001:0db8:85a3:0000:0000:8a2e:0370:7334')).to.equal('2001:0db8:85a3:0000:0000:8a2e:0370:7334') 17:     }) 18:   }) 19:   it('returns ipv4 address fully specified as ipv6 unchanged', () =&gt; { </pre> </div>		
L	test/server/utisSpec.ts (Line 16)	Make sure using a hardcoded IP address 2001:0db8:85a3:0000:0000:8a2e:0370:7334 is safe here. Category: Others
<div> <div>■ Security Hotspot Code:</div> <pre> 13: describe('utils', () =&gt; { 14:   describe('toSimpleIpAddress', () =&gt; { 15:     it('returns ipv6 address unchanged', () =&gt; { &gt;&gt;&gt; 16:       expect(utils.toSimpleIpAddress('2001:0db8:85a3:0000:0000:8a2e:0370:7334')).to.equal('2001:0db8:85a3:0000:0000:8a2e:0370:7334') 17:     }) 18:   }) 19:   it('returns ipv4 address fully specified as ipv6 unchanged', () =&gt; { </pre> </div>		
L	test/server/utisSpec.ts (Line 20)	Make sure using a hardcoded IP address 0:0:0:0:ffff:7f00:1 is safe here. Category: Others



<div> <div> <div></div> <div>Security Hotspot Code:</div> </div> <pre> 17:     }) 18: 19:     it('returns ipv4 address fully specified as ipv6 unchanged', () =&gt; { &gt;&gt;&gt; 20:         expect(utils.toSimpleIpAddress('0:0:0:0:ffff:7f00:1')).to.equal('0:0:0:0:ffff:7f00:1') 21:     }) 22: 23:     it('returns ipv6 loopback address as ipv4 address', () =&gt; { </pre> </div>		
<div> <div>L</div> </div>	<div> <div>test/server/utilsSpec.ts</div> <div>(Line 20)</div> </div>	<div> <div>Make sure using a hardcoded IP address 0:0:0:0:ffff:7f00:1 is safe here.</div> <div>Category: Others</div> </div>
<div> <div> <div></div> <div>Security Hotspot Code:</div> </div> <pre> 17:     }) 18: 19:     it('returns ipv4 address fully specified as ipv6 unchanged', () =&gt; { &gt;&gt;&gt; 20:         expect(utils.toSimpleIpAddress('0:0:0:0:ffff:7f00:1')).to.equal('0:0:0:0:ffff:7f00:1') 21:     }) 22: 23:     it('returns ipv6 loopback address as ipv4 address', () =&gt; { </pre> </div>		
<div> <div>L</div> </div>	<div> <div>test/server/utilsSpec.ts</div> <div>(Line 28)</div> </div>	<div> <div>Make sure using a hardcoded IP address ::ffff:192.0.2.128 is safe here.</div> <div>Category: Others</div> </div>
<div> <div> <div></div> <div>Security Hotspot Code:</div> </div> <pre> 25:     }) 26: 27:     it('returns ipv4-mapped address as ipv4 address', () =&gt; { &gt;&gt;&gt; 28:         expect(utils.toSimpleIpAddress('::ffff:192.0.2.128')).to.equal('192.0.2.128') 29:     }) 30: }) 31: </pre> </div>		
<div> <div>L</div> </div>	<div> <div>Dockerfile</div> <div>(Line 4)</div> </div>	<div> <div>Omitting "--ignore-scripts" can lead to the execution of shell scripts. Make sure it is safe here.</div> <div>Category: Others</div> </div>
<div> <div> <div></div> <div>Security Hotspot Code:</div> </div> <pre> 1: FROM node:22 AS installer 2: COPY . /juice-shop 3: WORKDIR /juice-shop &gt;&gt;&gt; 4: RUN npm i -g typescript ts-node 5: RUN npm install --omit=dev --unsafe-perm 6: RUN npm dedupe --omit=dev 7: RUN rm -rf frontend/node_modules </pre> </div>		

L	Dockerfile (Line 5)	Omitting "--ignore-scripts" can lead to the execution of shell scripts. Make sure it is safe here. Category: Others
<div> <div>■ Security Hotspot Code:</div> <pre> 2: COPY . /juice-shop 3: WORKDIR /juice-shop 4: RUN npm i -g typescript ts-node &gt;&gt;&gt; 5: RUN npm install --omit=dev --unsafe-perm 6: RUN npm dedupe --omit=dev 7: RUN rm -rf frontend/node_modules 8: RUN rm -rf frontend/.angular </pre> </div>		
L	Dockerfile (Line 19)	Omitting "--ignore-scripts" can lead to the execution of shell scripts. Make sure it is safe here. Category: Others
<div> <div>■ Security Hotspot Code:</div> <pre> 16: RUN rm il8n/*.json    true 17: 18: ARG CYCLONEDX_NPM_VERSION=latest &gt;&gt;&gt; 19: RUN npm install -g @cyclonedx/cyclonedx-npm@\$CYCLONEDX_NPM_VERSION 20: RUN npm run sbom 21: 22: FROM gcr.io/distroless/nodejs22-debian12 </pre> </div>		
L	Gruntfile.js (Line 77)	Make sure this weak hash algorithm is not used in a sensitive context here. Category: Others
<div> <div>■ Security Hotspot Code:</div> <pre> 74:     const crypto = require('node:crypto') 75:     fs.readdirSync('dist/').forEach(file =&gt; { 76:         const buffer = fs.readFileSync('dist/' + file) &gt;&gt;&gt; 77:         const md5 = crypto.createHash('md5') 78:         md5.update(buffer) 79:         const md5Hash = md5.digest('hex') 80:         const md5FileName = 'dist/' + file + '.md5' </pre> </div>		

## Permission (2 hotspots)

Risk	File Path	Rule & Message
M	Dockerfile (Line 2)	Copying recursively might inadvertently add sensitive data to the container. Make sure it is safe here. Category: Permission

<b>■ Security Hotspot Code:</b> <pre> 1: FROM node:22 AS installer &gt;&gt;&gt; 2: COPY . /juice-shop 3: WORKDIR /juice-shop 4: RUN npm i -g typescript ts-node 5: RUN npm install --omit=dev --unsafe-perm </pre>		
M	test/smoke/Dockerfile (Line 1)	The "alpine" image runs with "root" as the default user. Make sure it is safe here. Category: Permission
<b>■ Security Hotspot Code:</b> <pre> &gt;&gt;&gt; 1: FROM alpine 2: 3: RUN apk add curl 4: </pre>		

## Remote Code Execution (3 hotspots)

Risk	File Path	Rule & Message
M	routes/captcha.ts (Line 23)	Make sure that this dynamic injection or execution of code is safe. Category: Remote Code Execution
<b>■ Security Hotspot Code:</b> <pre> 20:     const secondOperator = operators[Math.floor((Math.random() * 3))] 21: 22:     const expression = firstTerm.toString() + firstOperator + secondTerm.toString() + secondOperator + thirdTerm.toString() &gt;&gt;&gt; 23:     const answer = eval(expression).toString() // eslint-disable-line no-eval 24: 25:     const captcha = { 26:         captchaId, </pre>		
M	routes/userProfile.ts (Line 62)	Make sure that this dynamic injection or execution of code is safe. Category: Remote Code Execution
<b>■ Security Hotspot Code:</b> <pre> 59:         if (!code) { 60:             throw new Error('Username is null') 61:         } &gt;&gt;&gt; 62:         username = eval(code) // eslint-disable-line no-eval 63:     } catch (err) { 64:         username = '\\\\' + username 65:     } </pre>		

M	test/cypress/e2e/contact.spec.ts (Line 258)	Make sure that this dynamic injection or execution of code is safe. Category: Remote Code Execution
<p>■ <b>Security Hotspot Code:</b></p> <pre> 255:     .then((val) =&gt; { 256:         cy.get('#captchaControl').clear() 257:         // eslint-disable-next-line no-eval &gt;&gt;&gt; 258:         const answer = eval(val).toString() 259:         cy.get('#captchaControl').type(answer) 260:     }) 261: }</pre>		

## Weak Cryptography (11 hotspots)

Risk	File Path	Rule & Message
M	data/datacreator.ts (Line 247)	Make sure that using this pseudorandom number generator is safe here. Category: Weak Cryptography
<p>■ <b>Security Hotspot Code:</b></p> <pre> 244:     let text = '' 245:     const possible = 'ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789' 246: &gt;&gt;&gt; 247:     for (let i = 0; i &lt; length; i++) { text += possible.charAt(Math.floor(Math.random() * possible.length)) } 248: 249:     return text 250: }</pre>		
M	data/datacreator.ts (Line 265)	Make sure that using this pseudorandom number generator is safe here. Category: Weak Cryptography
<p>■ <b>Security Hotspot Code:</b></p> <pre> 262:     config.get&lt;ProductConfig[]&gt;('products').map(async (product, index) =&gt; { 263:         return await QuantityModel.create({ 264:             ProductId: index + 1, &gt;&gt;&gt; 265:             quantity: product.quantity ?? Math.floor(Math.random() * 70 + 30), 266:             limitPerUser: product.limitPerUser ?? null 267:         }).catch((err: unknown) =&gt; { 268:             logger.error(`Could not create quantity: \${utils.getErrorMessage(err)}`)</pre>		
M	data/datacreator.ts (Line 323)	Make sure that using this pseudorandom number generator is safe here. Category: Weak Cryptography

<p>■ <b>Security Hotspot Code:</b></p> <pre> 320: 321: async function createProducts () { 322:   const products = structuredClone(config.get&lt;ProductConfig[]&gt;('products')).map((product) =&gt; { &gt;&gt;&gt; 323:     product.price = product.price ?? Math.floor(Math.random() * 9 + 1) 324:     product.deluxePrice = product.deluxePrice ?? product.price 325:     product.description = product.description    'Lorem ipsum dolor sit amet, consectetuer adipiscing elit.' 326: </pre>		
M	data/datacreator.ts (Line 698)	<p>Make sure that using this pseudorandom number generator is safe here.</p> <p>Category: Weak Cryptography</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 695:     totalPrice: basket1Products[0].total + basket1Products[1].total, 696:     bonus: basket1Products[0].bonus + basket1Products[1].bonus, 697:     products: basket1Products, &gt;&gt;&gt; 698:     eta: Math.floor((Math.random() * 5) + 1).toString(), 699:     delivered: false 700:   }, 701:   { </pre>		
M	frontend/src/app/code-snippet code-snippet.component.ts (Line 167)	<p>Make sure that using this pseudorandom number generator is safe here.</p> <p>Category: Weak Cryptography</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 164: 165:   shuffle () { 166:     this.randomFixes = this.fixes &gt;&gt;&gt; 167:     .map((fix, index) =&gt; ({ fix, index, sort: Math.random() })) 168:     .sort((a, b) =&gt; a.sort - b.sort) 169:     .map(({ fix, index }) =&gt; ({ fix, index })) 170:   } </pre>		
M	lib/insecurity.ts (Line 55)	<p>Make sure that using this pseudorandom number generator is safe here.</p> <p>Category: Weak Cryptography</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 52: } 53: 54: export const isAuthorized = () =&gt; expressJwt(({ secret: publicKey }) as any) &gt;&gt;&gt; 55: export const denyAll = () =&gt; expressJwt({ secret: '' + Math.random() } as any) 56: export const authorize = (user = {}) =&gt; jwt.sign(user, privateKey, { expiresIn: '6h', algorithm: 'RS256' }) 57: export const verify = (token: string) =&gt; token ? (jws.verify as ((token: string, secret: string) =&gt; boolean))(token, publicKey) : false 58: export const decode = (token: string) =&gt; { return jws.decode(token)?.payload } </pre>		

M	routes/captcha.ts (Line 15)	<p>Make sure that using this pseudorandom number generator is safe here.</p> <p>Category: Weak Cryptography</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 12:   const captchaId = req.app.locals.captchaId++ 13:   const operators = ['*', '+', '-'] 14: &gt;&gt;&gt; 15:   const firstTerm = Math.floor((Math.random() * 10) + 1) 16:   const secondTerm = Math.floor((Math.random() * 10) + 1) 17:   const thirdTerm = Math.floor((Math.random() * 10) + 1) 18: </pre>		
M	routes/captcha.ts (Line 16)	<p>Make sure that using this pseudorandom number generator is safe here.</p> <p>Category: Weak Cryptography</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 13:   const operators = ['*', '+', '-'] 14: 15:   const firstTerm = Math.floor((Math.random() * 10) + 1) &gt;&gt;&gt; 16:   const secondTerm = Math.floor((Math.random() * 10) + 1) 17:   const thirdTerm = Math.floor((Math.random() * 10) + 1) 18: 19:   const firstOperator = operators[Math.floor((Math.random() * 3))] </pre>		
M	routes/captcha.ts (Line 17)	<p>Make sure that using this pseudorandom number generator is safe here.</p> <p>Category: Weak Cryptography</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 14: 15:   const firstTerm = Math.floor((Math.random() * 10) + 1) 16:   const secondTerm = Math.floor((Math.random() * 10) + 1) &gt;&gt;&gt; 17:   const thirdTerm = Math.floor((Math.random() * 10) + 1) 18: 19:   const firstOperator = operators[Math.floor((Math.random() * 3))] 20:   const secondOperator = operators[Math.floor((Math.random() * 3))] </pre>		
M	routes/captcha.ts (Line 19)	<p>Make sure that using this pseudorandom number generator is safe here.</p> <p>Category: Weak Cryptography</p>

<b>■ Security Hotspot Code:</b> <pre> 16:    const secondTerm = Math.floor((Math.random() * 10) + 1) 17:    const thirdTerm = Math.floor((Math.random() * 10) + 1) 18: &gt;&gt;&gt; 19:    const firstOperator = operators[Math.floor((Math.random() * 3))] 20:    const secondOperator = operators[Math.floor((Math.random() * 3))] 21: 22:    const expression = firstTerm.toString() + firstOperator + secondTerm.toString() + secondOperator + thirdTerm.toString() </pre>		
M	routes/captcha.ts (Line 20)	<p>Make sure that using this pseudorandom number generator is safe here.</p> <p>Category: Weak Cryptography</p>
<b>■ Security Hotspot Code:</b> <pre> 17:    const thirdTerm = Math.floor((Math.random() * 10) + 1) 18: 19:    const firstOperator = operators[Math.floor((Math.random() * 3))] &gt;&gt;&gt; 20:    const secondOperator = operators[Math.floor((Math.random() * 3))] 21: 22:    const expression = firstTerm.toString() + firstOperator + secondTerm.toString() + secondOperator + thirdTerm.toString() 23:    const answer = eval(expression).toString() // eslint-disable-line no-eval </pre>		

## Cross-Site Scripting (XSS) (9 hotspots)

Risk	File Path	Rule & Message
H	frontend/src/app/about about.component.ts (Line 121)	<p>Make sure disabling Angular built-in sanitization is safe here.</p> <p>Category: Cross-Site Scripting (XSS)</p>
<b>■ Security Hotspot Code:</b> <pre> 118:    feedbacks[i].comment = `&lt;span style="width: 90%; display:block;"&gt;\${ 119:        feedbacks[i].comment 120:    }&lt;br/&gt; (\${this.stars[feedbacks[i].rating]})&lt;/span&gt;` &gt;&gt;&gt; 121:    feedbacks[i].comment = this.sanitizer.bypassSecurityTrustHtml( 122:        feedbacks[i].comment 123:    ) 124: </pre>		
H	frontend/src/app/administration administration.component.ts (Line 57)	<p>Make sure disabling Angular built-in sanitization is safe here.</p> <p>Category: Cross-Site Scripting (XSS)</p>

<p>■ <b>Security Hotspot Code:</b></p> <pre> 54:         this.userDataSource = users 55:         this.userDataSourceHidden = users 56:         for (const user of this.userDataSource) { &gt;&gt;&gt; 57:             user.email = this.sanitizer.bypassSecurityTrustHtml(`&lt;span class="\${this.doesUserHaveAnActiveSession(user) ? 'confirmation' : 'error'}"&gt;\${user.email}&lt;/span&gt;`) 58:         } 59:         this.userDataSource = new MatTableDataSource(this.userDataSource) 60:         this.userDataSource.paginator = this.paginatorUsers </pre>		
H	frontend/src/app/administration administration.component.ts (Line 75)	Make sure disabling Angular built-in sanitization is safe here. Category: Cross-Site Scripting (XSS)
<p>■ <b>Security Hotspot Code:</b></p> <pre> 72:         next: (feedbacks) =&gt; { 73:             this.feedbackDataSource = feedbacks 74:             for (const feedback of this.feedbackDataSource) { &gt;&gt;&gt; 75:                 feedback.comment = this.sanitizer.bypassSecurityTrustHtml(feedback.comment) 76:             } 77:             this.feedbackDataSource = new MatTableDataSource(this.feedbackDataSource) 78:             this.feedbackDataSource.paginator = this.paginatorFeedb </pre>		
H	frontend/src/app/data-export data-export.component.ts (Line 55)	Make sure disabling Angular built-in sanitization is safe here. Category: Cross-Site Scripting (XSS)
<p>■ <b>Security Hotspot Code:</b></p> <pre> 52: 53:     getNewCaptcha () { 54:         this.imageCaptchaService.getCaptcha().subscribe((data: any) =&gt; { &gt;&gt;&gt; 55:             this.captcha = this.sanitizer.bypassSecurityTrustHtml(data.image) 56:         }) 57:     } 58: </pre>		
H	frontend/src/app/last-login-ip last-login-ip.component.ts (Line 38)	Make sure disabling Angular built-in sanitization is safe here. Category: Cross-Site Scripting (XSS)
<p>■ <b>Security Hotspot Code:</b></p> <pre> 35:         payload = jwtDecode(token) 36:         if (payload.data.lastLoginIp) { 37:             // eslint-disable-next-line @typescript-eslint/restrict-template-expressions &gt;&gt;&gt; 38:             this.lastLoginIp = this.sanitizer.bypassSecurityTrustHtml(`&lt;small&gt;\${payload.data.lastLoginIp}&lt;/small&gt;`) 39:         } 40:     } 41: } </pre>		
H	frontend/src/app/score-board score-board.component.ts (Line 86)	Make sure disabling Angular built-in sanitization is safe here. Category: Cross-Site Scripting (XSS)



<p>■ <b>Security Hotspot Code:</b></p> <pre> 83:             hintsAvailable: hints.filter((hint) =&gt; hint.ChallengeId === challenge.id).length, 84:             tagList: challenge.tags ? challenge.tags.split(',').map((tag) =&gt; tag.trim()) : [], 85:             originalDescription: challenge.description as string, &gt;&gt;&gt; 86:             description: this.sanitizer.bypassSecurityTrustHtml(challenge.description as string) 87:         } 88:     }) 89: </pre>		
<div>H</div>	frontend/src/app/search-result search-result.component.ts <b>(Line 135)</b>	<p><b>Make sure disabling Angular built-in sanitization is safe here.</b>  Category: Cross-Site Scripting (XSS)</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 132: 133:     trustProductDescription (tableData: any[]) { // vuln-code-snippet neutral-line restfulXssChallenge 134:         for (let i = 0; i &lt; tableData.length; i++) { // vuln-code-snippet neutral-line restfulXssChallenge &gt;&gt;&gt; 135:             tableData[i].description = this.sanitizer.bypassSecurityTrustHtml(tableData[i].description) // vuln-code-snippet vuln-line restfulXssChallenge 136:         } // vuln-code-snippet neutral-line restfulXssChallenge 137:     } // vuln-code-snippet neutral-line restfulXssChallenge 138:     // vuln-code-snippet end restfulXssChallenge </pre>		
<div>H</div>	frontend/src/app/search-result search-result.component.ts <b>(Line 161)</b>	<p><b>Make sure disabling Angular built-in sanitization is safe here.</b>  Category: Cross-Site Scripting (XSS)</p>
<p>■ <b>Security Hotspot Code:</b></p> <pre> 158:             this.io.socket().emit('verifyLocalXssChallenge', queryParam) 159:         }) // vuln-code-snippet hide-end 160:             this.dataSource.filter = queryParam.toLowerCase() &gt;&gt;&gt; 161:             this.searchValue = this.sanitizer.bypassSecurityTrustHtml(queryParam) // vuln-code-snippet vuln-line localXssChallenge xssBonusChallenge 162:             this.gridDataSource.subscribe((result: any) =&gt; { 163:                 if (result.length === 0) { 164:                     this.emptyState = true </pre>		
<div>H</div>	frontend/src/app/track-result track-result.component.ts <b>(Line 45)</b>	<p><b>Make sure disabling Angular built-in sanitization is safe here.</b>  Category: Cross-Site Scripting (XSS)</p>

**■ Security Hotspot Code:**

```
42:     this.orderId = this.route.snapshot.queryParams.id
43:     this.trackOrderService.find(this.orderId).subscribe((results) => {
44:         // eslint-disable-next-line @typescript-eslint/restrict-template-expressions
>>> 45:         this.results.orderNo =
this.sanitizer.bypassSecurityTrustHtml(`<code>${results.data[0].orderId}</code>`)
46:         this.results.email = results.data[0].email
47:         this.results.totalPrice = results.data[0].totalPrice
48:         this.results.products = results.data[0].products
```