Task 2 - Inspekcija koda

Uloge u timu:
- Moderator i zapisničar: Zijad Lendo
- Autor/programer/developer: Emir Kapić
- Recenzent/ocjenjivač: Emir Kapić, Eman Alibalić, Zijad Lendo, Alem Muratović i Muaz Sikirić

Sadržaj

Tabela grešaka

Ozbiljnost	Opis
5 (kritično)	(1) Sprječava postizanje osnovnih mogućnosti. (2) Ugrožava sigurnost, zaštitu i druge kritične zahtjeve.
4	(1) Nepovoljno utiče na postizanje osnovnih mogućnosti, kada rješenje kojim se greška može izbjeći nije poznato. (2) Nepovoljno utiče na tehnički, troškovni i rasporedni rizik projekta ili sistemskog održavanja, kada rješenje kojim se greška može izbjeći nije poznato.
3	(1) Nepovoljno utiče na postizanje osnovnih mogućnosti, ali je rješenje kojim se greška može izbjeći poznato. (2) Nepovoljno utiče na tehnički, troškovni i rasporedni rizik projekta ili sistemskog održavanja, ali je rješenje kojim se greška može izbjeći poznato.
2	(1) Korisnička/operatorska neudobnost koja ne utiče na zahtijevanu misiju ili operaterove osnovne mogućnosti. (2) Neugodnost za programere ili personal na održavanju, ali ne sprečava realizaciju ovih odgovornosti.
1 (minorno)	Bilo koji drugi efekat.

Izvještaji o greškama

Lista provjere (1)

Struktura
- ☑ Does the code completely and correctly implement the design?
- ☑ Does the code conform to any pertinent coding standards?
- ☑ Is the code well-structured, consistent in style, and consistently formatted?
- ☐ Are there any uncalled or unneeded procedures or any unreachable code?
- ☐ Are there any leftover stubs or test routines in the code?
- ☐ Can any code be replaced by calls to external reusable components or library functions?
- ☐ Are there any blocks of repeated code that could be condensed into a single procedure?
- ☑ Is storage use efficient?
- ☑ Are symbolics used rather than "magic number" constants or string constants?
- ☐ Are any modules excessively complex and should be restructured or split into multiple routines?

Dokumentacija
- ☑ Is the code clearly and adequately documented with an easy-to-maintain commenting style?
- ☑ Are all comments consistent with the code?

Varijable
- ☑ Are all variables properly defined with meaningful, consistent, and clear names?
- ☑ Do all assigned variables have proper type consistency or casting?
- ☐ Are there any redundant or unused variables?

Aritmetičke operacije
- ☑ Does the code avoid comparing floating-point numbers for equality?
- ☑ Does the code systematically prevent rounding errors?
- ☑ Does the code avoid additions and subtractions on numbers with greatly different magnitudes?
- ☑ Are divisors tested for zero or noise?

Petlje i grananja

- ☑ Are all loops, branches, and logic constructs complete, correct, and properly nested?
- ☑ Are the most common cases tested first in IF- -ELSEIF chains?
- ☑ Are all cases covered in an IF- -ELSEIF or CASE block, including ELSE or DEFAULT clauses?
- ☑ Does every case statement have a default?
- ☑ Are loop termination conditions obvious and invariably achievable?
- ☑ Are indexes or subscripts properly initialized, just prior to the loop?
- ☐ Can any statements that are enclosed within loops be placed outside the loops?
- ☐ Does the code in the loop avoid manipulating the index variable or using it upon exit from the loop?

Defanzivno programiranje

- ☑ Are indexes, pointers, and subscripts tested against array, record, or file bounds?
- ☑ Are imported data and input arguments tested for validity and completeness?
- ☑ Are all output variables assigned?
- ☑ Are the correct data operated on in each statement?
- ☑ Is every memory allocation deallocated?
- ☐ Are timeouts or error traps used for external device accesses?
- ☑ Are files checked for existence before attempting to access them?
- ☑ Are all files and devices left in the correct state upon program termination?

Izvještaj (1) o greškama za sesiju inspekcije

Datum sesije: 16.12.2023.   **Izvještaj pripremio:** Emir Kapić
Naziv projekta: TechHaven
Dokument inspekcije: Pregled dizajna   **Verzija:** 1
Sekcije dokumenta koje su predmet inspekcije: OrdersController, HighestPriceStrategy i LowestPriceStrategy
Inspekcijski tim: Emir Kapić, Eman Alibalić, Zijad Lendo, Alem Muratović I Muaz Sikirić

1 Lista grešaka

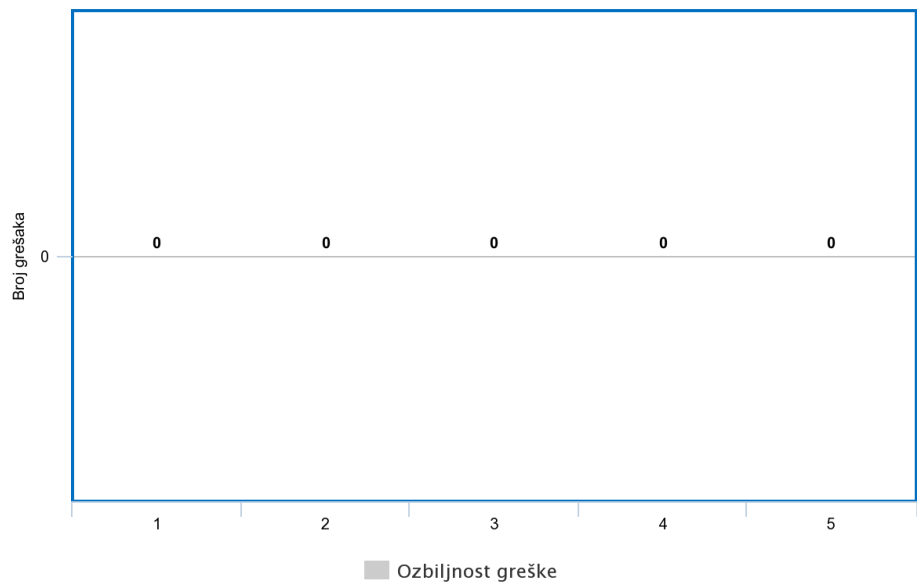| #	Tip greške (ozbiljnost)	Priroda greške	Opis greške	Lokacija greške
				Ukupno: 20 minuta

2 Aktivnosti nakon formalnog pregleda dizajna (Follow up decisions)

A	Slijede ispravke diskusiranih dijelova

3 Komentari

*W-Wrong, M-Missing, O-Other

Histogram grešaka

Lista provjere (2)

Struktura

- ☑ Does the code completely and correctly implement the design?
- ☑ Does the code conform to any pertinent coding standards?
- ☑ Is the code well-structured, consistent in style, and consistently formatted?
- ☐ Are there any uncalled or unneeded procedures or any unreachable code?
- ☐ Are there any leftover stubs or test routines in the code?
- ☐ Can any code be replaced by calls to external reusable components or library functions?
- ☐ Are there any blocks of repeated code that could be condensed into a single procedure?
- ☑ Is storage use efficient?
- ☑ Are symbolics used rather than "magic number" constants or string constants?
- ☐ Are any modules excessively complex and should be restructured or split into multiple routines?

Dokumentacija

- ☑ Is the code clearly and adequately documented with an easy-to-maintain commenting style?
- ☑ Are all comments consistent with the code?

Varijable

- ☑ Are all variables properly defined with meaningful, consistent, and clear names?
- ☑ Do all assigned variables have proper type consistency or casting?
- ☐ Are there any redundant or unused variables?

Aritmetičke operacije

- ☑ Does the code avoid comparing floating-point numbers for equality?
- ☑ Does the code systematically prevent rounding errors?
- ☑ Does the code avoid additions and subtractions on numbers with greatly different magnitudes?
- ☑ Are divisors tested for zero or noise?

Petlje i grananja

- ☑ Are all loops, branches, and logic constructs complete, correct, and properly nested?
- ☑ Are the most common cases tested first in IF- -ELSEIF chains?

- ☑ Are all cases covered in an IF- -ELSEIF or CASE block, including ELSE or DEFAULT clauses?
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- ☐ Can any statements that are enclosed within loops be placed outside the loops?
- ☐ Does the code in the loop avoid manipulating the index variable or using it upon exit from the loop?

Defanzivno programiranje

- ☑ Are indexes, pointers, and subscripts tested against array, record, or file bounds?
- ☑ Are imported data and input arguments tested for validity and completeness?
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- ☑ Are the correct data operated on in each statement?
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- ☑ Are all files and devices left in the correct state upon program termination?

Izvještaj (2) o greškama za sesiju inspekcije

Datum sesije: 16.12.2023.   **Izvještaj pripremio:** Eman Alibalić

Naziv projekta: TechHaven

Dokument inspekcije: Pregled dizajna   **Verzija:** 1

Sekcije dokumenta koje su predmet inspekcije: CartController, OrdersManager i Randomizer

Inspekcijski tim: Emir Kapić, Eman Alibalić, Zijad Lendo, Alem Muratović I Muaz Sikirić

1 Lista grešaka

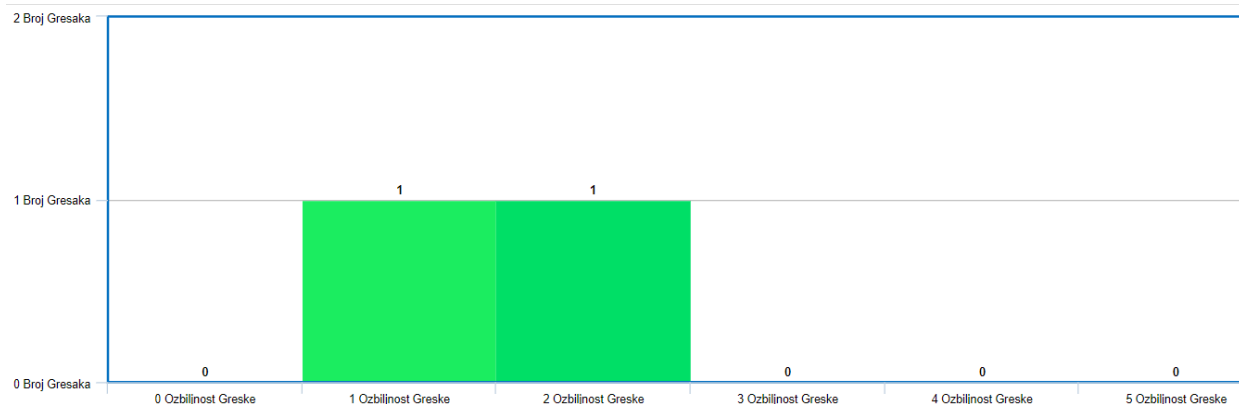| #	Tip greške (ozbiljnost)	Priroda greške	Opis greške	Lokacija greške
1	2	O	Izbrisan kod bez funkcionalnosti	CartController
2	1	O	Izbrisan bespotreban kod	CartController
				Ukupno: 30 minuta

2 Aktivnosti nakon formalnog pregleda dizajna (Follow up decisions)

A	Slijede ispravke diskusiranih dijelova

3 Komentari

*W-Wrong, M-Missing, O-Other

Histogram grešaka

Lista provjere (3)

Struktura
- ☑ Does the code completely and correctly implement the design?
- ☑ Does the code conform to any pertinent coding standards?
- ☐ Is the code well-structured, consistent in style, and consistently formatted?
- ☐ Are there any uncalled or unneeded procedures or any unreachable code?
- ☐ Are there any leftover stubs or test routines in the code?
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- ☑ Is storage use efficient?
- ☑ Are symbolics used rather than "magic number" constants or string constants?
- ☐ Are any modules excessively complex and should be restructured or split into multiple routines?

Dokumentacija
- ☐ Is the code clearly and adequately documented with an easy-to-maintain commenting style?
- ☐ Are all comments consistent with the code?

Varijable
- ☑ Are all variables properly defined with meaningful, consistent, and clear names?
- ☐ Do all assigned variables have proper type consistency or casting?
- ☐ Are there any redundant or unused variables?

Aritmetičke operacije
- ☑ Does the code avoid comparing floating-point numbers for equality?
- ☑ Does the code systematically prevent rounding errors?
- ☑ Does the code avoid additions and subtractions on numbers with greatly different magnitudes?
- ☑ Are divisors tested for zero or noise?

Petlje i grananja
- ☑ Are all loops, branches, and logic constructs complete, correct, and properly nested?
- ☐ Are the most common cases tested first in IF- -ELSEIF chains?

- ☐ Are all cases covered in an IF- -ELSEIF or CASE block, including ELSE or DEFAULT clauses?
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- ☐ Can any statements that are enclosed within loops be placed outside the loops?
- ☐ Does the code in the loop avoid manipulating the index variable or using it upon exit from the loop?

Defanzivno programiranje

- ☐ Are indexes, pointers, and subscripts tested against array, record, or file bounds?
- ☑ Are imported data and input arguments tested for validity and completeness?
- ☑ Are all output variables assigned?
- ☑ Are the correct data operated on in each statement?
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- ☐ Are files checked for existence before attempting to access them?
- ☑ Are all files and devices left in the correct state upon program termination?

Izvještaj (3) o greškama za sesiju inspekcije

Datum sesije: 16.12.2023. **Izvještaj pripremio:** Zijad Lendo

Naziv projekta: TechHaven

Dokument inspekcije: Pregled dizajna **Verzija:** 1

Sekcije dokumenta koje su predmet inspekcije: Filter, AlphabeticalStrategy i ProductsController

Inspekcijski tim: Emir Kapić, Eman Alibalić, Zijad Lendo, Alem Muratović I Muaz Sikirić

1 Lista grešaka

| #	Tip greške (ozbiljnost)	Priroda greške	Opis greške	Lokacija greške
1	2	O	Nečitak kod	Filter
2	3	M	Nesigurno definisani atributi	Filter
3	1	O	Bespotreban kod	Filter
				Ukupno: 30 minuta

2 Aktivnosti nakon formalnog pregleda dizajna (Follow up decisions)

A	Slijede ispravke diskusiranih dijelova

3 Komentari

*W-Wrong, M-Missing, O-Other

Histogram grešaka

Ozbiljnost greške
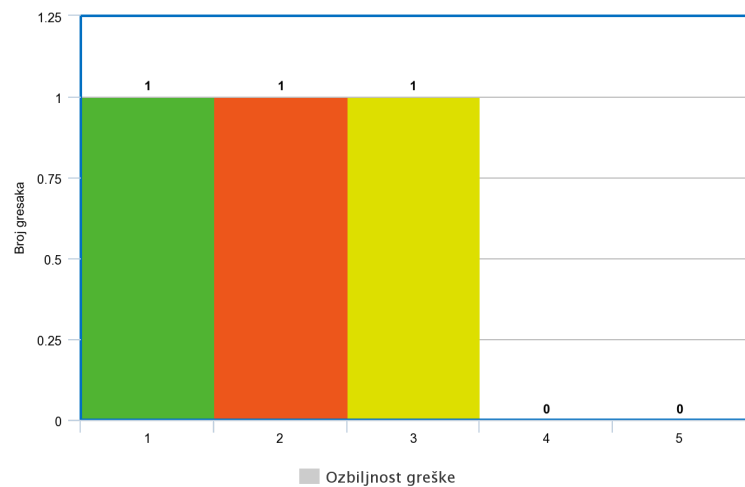
Highcharts.com

Lista provjere (4)

Struktura

- ☑ Does the code completely and correctly implement the design?
- ☑ Does the code conform to any pertinent coding standards?
- ☑ Is the code well-structured, consistent in style, and consistently formatted?
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- ☑ Is storage use efficient?
- ☑ Are symbolics used rather than "magic number" constants or string constants?
- ☐ Are any modules excessively complex and should be restructured or split into multiple routines?

Dokumentacija

- ☑ Is the code clearly and adequately documented with an easy-to-maintain commenting style?
- ☑ Are all comments consistent with the code?

Varijable

- ☑ Are all variables properly defined with meaningful, consistent, and clear names?
- ☑ Do all assigned variables have proper type consistency or casting?
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Aritmetičke operacije

- ☑ Does the code avoid comparing floating-point numbers for equality?
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- ☑ Does the code avoid additions and subtractions on numbers with greatly different magnitudes?
- ☑ Are divisors tested for zero or noise?

Petlje i grananja

- ☑ Are all loops, branches, and logic constructs complete, correct, and properly nested?
- ☑ Are the most common cases tested first in IF- -ELSEIF chains?

- ☑ Are all cases covered in an IF- -ELSEIF or CASE block, including ELSE or DEFAULT clauses?
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Defanzivno programiranje
- ☑ Are indexes, pointers, and subscripts tested against array, record, or file bounds?
- ☐ Are imported data and input arguments tested for validity and completeness?
- ☑ Are all output variables assigned?
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- ☑ Are timeouts or error traps used for external device accesses?
- ☑ Are files checked for existence before attempting to access them?
- ☑ Are all files and devices left in the correct state upon program termination?

Izvještaj (4) o greškama za sesiju inspekcije

Datum sesije: 16.12.2023.   **Izvještaj pripremio:** Alem Muratović

Naziv projekta: TechHaven

Dokument inspekcije: Pregled dizajna   **Verzija:** 1

Sekcije dokumenta koje su predmet inspekcije: HomeController i CustomerRecommendation

Inspekcijski tim: Emir Kapić, Eman Alibalić, Zijad Lendo, Alem Muratović I Muaz Sikirić

1 Lista grešaka

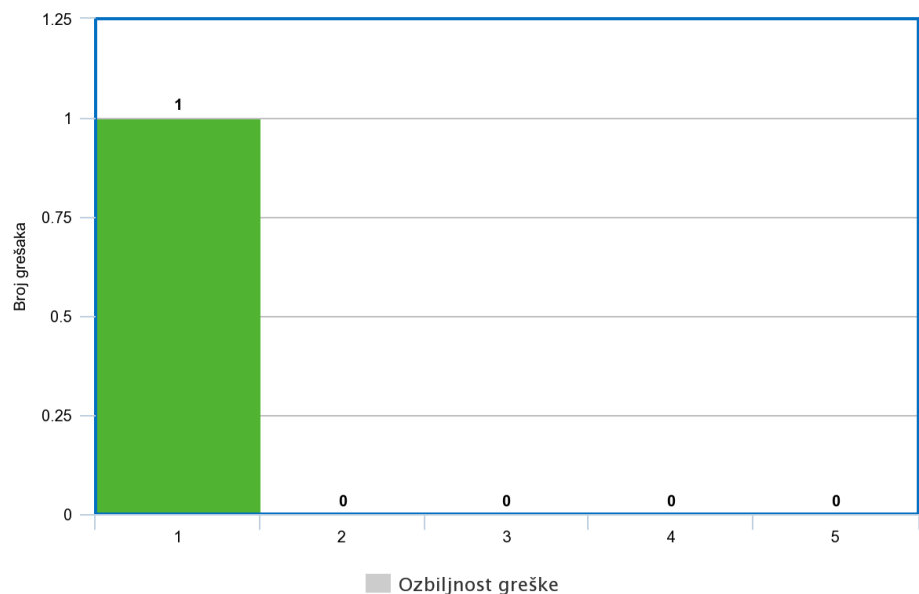| #	Tip greške (ozbiljnost)	Priroda greške	Opis greške	Lokacija greške
1	1	O	Bespotreban kod	HomeController
				Ukupno: 15 minuta

2 Aktivnosti nakon formalnog pregleda dizajna (Follow up decisions)

A	Slijede ispravke diskusiranih dijelova

3 Komentari

*W-Wrong, M-Missing, O-Other

Histogram grešaka

Ozbiljnost greške

Highcharts.com

Lista provjere (5)

Struktura
- ☑ Does the code completely and correctly implement the design?
- ☑ Does the code conform to any pertinent coding standards?
- ☑ Is the code well-structured, consistent in style, and consistently formatted?
- ☐ Are there any uncalled or unneeded procedures or any unreachable code?
- ☐ Are there any leftover stubs or test routines in the code?
- ☐ Can any code be replaced by calls to external reusable components or library functions?
- ☐ Are there any blocks of repeated code that could be condensed into a single procedure?
- ☑ Is storage use efficient?
- ☑ Are symbolics used rather than "magic number" constants or string constants?
- ☐ Are any modules excessively complex and should be restructured or split into multiple routines?

Dokumentacija
- ☑ Is the code clearly and adequately documented with an easy-to-maintain commenting style?
- ☑ Are all comments consistent with the code?

Varijable
- ☑ Are all variables properly defined with meaningful, consistent, and clear names?
- ☑ Do all assigned variables have proper type consistency or casting?
- ☐ Are there any redundant or unused variables?

Aritmetičke operacije
- ☑ Does the code avoid comparing floating-point numbers for equality?
- ☐ Does the code systematically prevent rounding errors?
- ☑ Does the code avoid additions and subtractions on numbers with greatly different magnitudes?
- ☐ Are divisors tested for zero or noise?

Petlje i grananja
- ☑ Are all loops, branches, and logic constructs complete, correct, and properly nested?
- ☑ Are the most common cases tested first in IF- -ELSEIF chains?

- ☐ Are all cases covered in an IF- -ELSEIF or CASE block, including ELSE or DEFAULT clauses?
- ☐ Does every case statement have a default?
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- ☐ Can any statements that are enclosed within loops be placed outside the loops?
- ☐ Does the code in the loop avoid manipulating the index variable or using it upon exit from the loop?

Defanzivno programiranje

- ☐ Are indexes, pointers, and subscripts tested against array, record, or file bounds?
- ☐ Are imported data and input arguments tested for validity and completeness?
- ☑ Are all output variables assigned?
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- ☐ Are timeouts or error traps used for external device accesses?
- ☐ Are files checked for existence before attempting to access them?
- ☑ Are all files and devices left in the correct state upon program termination?

Izvještaj (5) o greškama za sesiju inspekcije

Datum sesije: 16.12.2023.   **Izvještaj pripremio:** Muaz Sikirić

Naziv projekta: TechHaven

Dokument inspekcije: Pregled dizajna   **Verzija:** 1

Sekcije dokumenta koje su predmet inspekcije: MyAccountController, CartManager i ProductManager

Inspekcijski tim: Emir Kapić, Eman Alibalić, Zijad Lendo, Alem Muratović I Muaz Sikirić

1 Lista grešaka

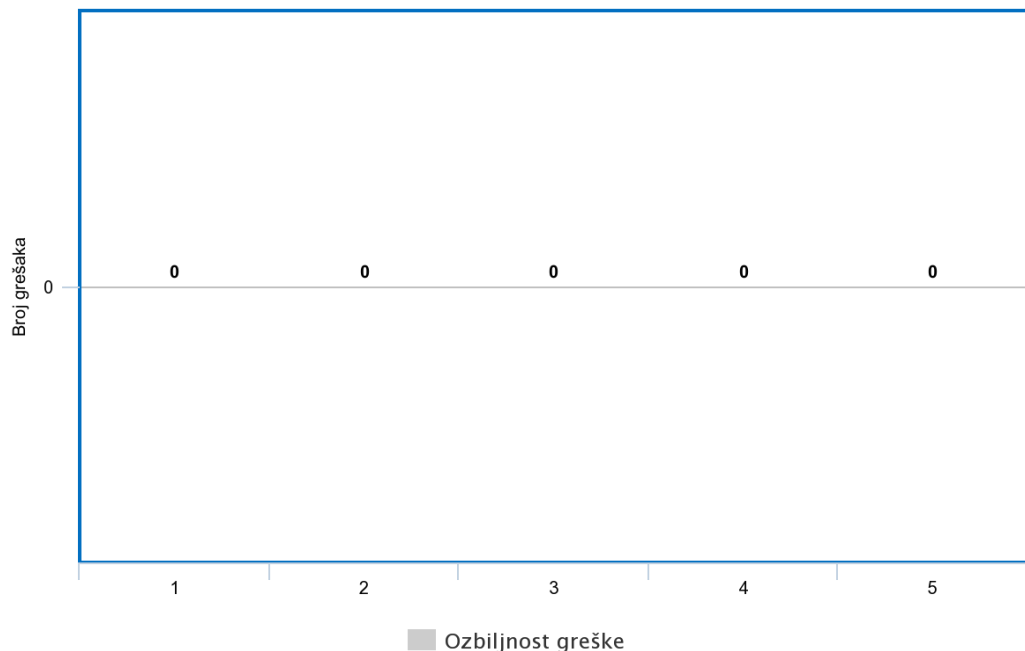| #	Tip greške (ozbiljnost)	Priroda greške	Opis greške	Lokacija greške
				Ukupno: 30 minuta

2 Aktivnosti nakon formalnog pregleda dizajna (Follow up decisions)

A	Slijede ispravke diskusiranih dijelova

3 Komentari

*W-Wrong, M-Missing, O-Other

Histogram grešaka

Sumarni izvještaj za sesiju inspekcije

Datum sesije: 16.12.2023.
Naziv projekta: TechHaven
Dokument inspekcije: Detaljni dizajn   **Verzija:** 2
Ukupno: (A) 5 stranice/linije teksta
Inspekcijski tim: Emir Kapić, Eman Alibalić, Zijad Lendo, Alem Muratović I Muaz Sikirić

Sumarno o greškama

| Ozbiljnost greške	Prirode greške			Ukupno grešaka	Faktor ozbiljnosti	Ukupno grešaka (standardizovano)	Komentar
	W	M	O				
5 (kritično)	0	0	0	0	16	0	/
4	0	0	0	0	8	0	/
3	0	1	0	1	4	4	/
2	0	0	2	2	2	4	/
1 (minorno)	0	0	3	3	1	3	/
Ukupno	0	1	5	(C) 6		(D) 11	

Metrike

- Prosječno grešaka po stranici = C/A = 1.2
- Prosječno grešaka po stranici (standardizovano) = D/A = 2.2
- Efikasnost detekcije grešaka (sati po greškama) = B/C = 0.347
- Efikasnost detekcije grešaka (standardizovano) = B/D = 0.189

Spisak urađenih korektivnih relacija

1. Prolazak redom kroz kod i resolvanje prvo lakših grešaka i komentara
2. Resolvanje issue-a oko grešaka veće ozbiljnosti
3. Provjera funkionalnosti koda
4. Moderator merga promjene u main

Inspekcije su rađene koristeći alat CodeStream i resolvane pushanjem commita na repozitorij:
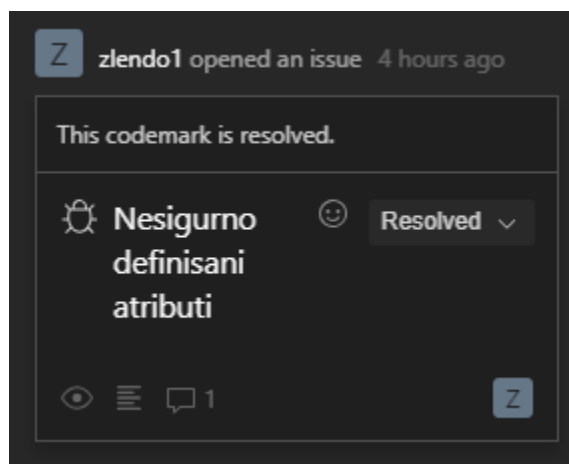
Commit

fixed unsafe to readonly

⎇ master

🐾 zlendo1 committed 3 hours ago

Showing **1** changed file with **5 additions** and **5 deletions**.

```
      10 ■■■■□  TechHaven/Services/Filter.cs  ⎘
              @@ -4,11 +4,11 @@ namespace TechHaven.Services
   4    4    {
   5    5        public class Filter
   6    6        {
   7    -           private int? minPrice = null;
   8    -           private int? maxPrice = null;
   9    -           private IEnumerable<string>? manufacturers = null;
  10    -           public IEnumerable<string>? categories = null;
  11    -           private ISortStrategy? sortStrategy = null;
        7   +           private readonly int? minPrice = null;
        8   +           private readonly int? maxPrice = null;
        9   +           private readonly IEnumerable<string>? manufacturers = null;
       10   +           public readonly IEnumerable<string>? categories = null;
       11   +           private readonly ISortStrategy? sortStrategy = null;
  12   12
  13   13            public Filter(int minPrice, int maxPrice, IEnumerable<string> manufacturers, IEnumerable<string> categories, ISortStrategy sortStrategy)
  14   14            {
```

0 comments on commit a5918c7