

LAB 1: Railway ticketing portal

1. Task: Create a detailed list of functional and non-functional software requirements for the Railway ticketing portal system.

Functional requirements:

USERS:

1. Account management: ~ FR 1
 1. Create an accounts
 2. Edit user information
 3. View user information
 4. Delete user
2. Ticket reservation: => improve
 1. Searching: ~ FR 2
 1. General - just scrolling and looking over the tickets
 2. Specified - enter a specific time slot and destination
 2. Pay the reservation: ~ FR 3
 1. Standard = no promotions
 2. Based on hours
 3. Based on age
 4. Pay via gift voucher
 3. Reservations: ~ FR 4
 1. Make a reservation
 2. Add one or more tickets
 3. Cancel a reservation
 4. See history in the application: ~ FR 5
 1. Upcoming trips
 2. Old trips

ADMINISTRATORS:

3. Set up access roles ~ FR 6
 1. CLIENT = view and buy tickets
 2. ADMIN = can add tickets in the system; edit data; edit hours; delete tickets
4. Payment support: ~ FR 7
 1. Credit card - VISA
 2. Debit card - MASTERCARD
 3. Support different currencies - EUR, DOLLAR, BGN
 4. Voucher selling
5. Language support: ~ FR 8
 1. Support EN, DE, BG
 2. Add another language by client request

Non-functional requirements:

1. Security: ~ NFR 9
 1. The user authenticates his-/herself
 2. System verification - what role does the user have?
2. Performance: ~ NFR 10
 1. The responses to the user do not take more than 2sec.
3. Reliability: ~ NFR 11
 1. Application is available 24 hours, 7 days a week.
4. Localisation: ~ NFR 12
 1. The developers support different time zones - Germany, Bulgaria, UK, France
 2. The developers support different currencies - Euro, Dollar, Bulgarian lev

5. Analytics: ~ NFR 13

1. The system generate to the user response [via file for example] by buying a ticket
2. The system generate to the user response [via status for example] by change of a ticket time
3. The system generate to the user response [via file/status for example] by change of a reservation
4. The system generate to the user a notification by promotion/sale

6. Performance: ~ NFR 14

1. The developers monitor of the system with a tool
2. The developers control the data flow
3. The developers get an alert by a problem
4. The users get an notification by a problem {For example: The site is facing difficulties. Please try again in a few minutes}.

7. Recovery: ~ NFR 15

1. The system supports data back-up.

8. Compatibility: ~ NFR 16

1. The developers support responsive/flexible use of the system - to be used from different browsers
2. The developers support responsive design - when the application is used from screens with different resolutions, there is no overlapping

9. Integration: ~ NFR 17

1. The developers integrate paying systems - for example PayPal.
2. The developers integrate security systems - for example Keycloak

10. Compliance: ~ NFR 18

1. The developers adapt the application to the industry standards.

11. Usability: ~ NFR 19

1. The developers implement an user-friendly interface
2. The developers implement features for people with disabilities {blind people - voice control}

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2. Task: Write 3 Features using Gherkin Syntax.

Feature: Reservation for a ticket

Scenario: Make a reservation for a ticket

Given: the railway ticket portal home page is opened

When: the traveller searches for a ticket on '10.10.2023'

AND: the train should leave at '23:30h'

AND: the train should travel for Frankfurt

AND: the traveller adds the first result to the cart

Then: the cart contains one ticket for 'Frankfurt' on '10.10.2023' at '23:30H'

Scenario: Make a reservation for a ticket with available discount

Given: the railway ticket portal home page is opened

When: the traveller searches for a ticket on '10.10.2023'

AND: It is '8p.m'

AND: the train should leave at '23:30h'

AND: the train should travel for Frankfurt

AND: the traveller adds the first result to the cart

AND: the traveller opens his/hers shopping cart

AND: the price is reduced with 5% because of the hour that the reservation is made

Then: the cart contains one ticket for 'Frankfurt' on '10.10.2023' at '23:30h' with a discount

Scenario: Make a reservation for a ticket with a 'family rail card'

Given: the railway ticket portal home page is opened

When: the traveller searches for a ticket on '12.10.2023'

AND: the traveller has a kid who is 12 years old

AND: the traveller has a 'family rail card'

AND: the train should leave at '12:30h'

AND: the train should travel for Berlin

AND: the traveller adds 2 tickets of the first result to the cart

AND: the traveller opens his/hers shopping cart

AND: the price is reduced with 50% because of the 'family rail card'

Then: the cart contains one ticket for 'Berlin' on '12.10.2023' at '12:30h' with a discount

Scenario: Make a reservation for a ticket 'over 60s'

Given: the railway ticket portal home page is opened

When: the traveller is in the group 'over 60s'

AND: the traveller searches for a ticket on '12.10.2023'

AND: the train should leave at '12:30h'

AND: the train should travel for Berlin

AND: the traveller adds 2 tickets of the first result to the cart

AND: the traveller opens his/hers shopping cart

AND: the price is reduced with 34% because of the 'over 60s' discount

Then: the cart contains one ticket for 'Berlin' on '12.10.2023' at '12:30h' with a discount

Feature: Create an account in the railway ticketing portal

Scenario: the user want to create his/hers account

Given: the railway ticket portal login page is opened

When: the user clicks the button 'Sign up'

AND: the user enters an email

AND: the user enters a password

AND: the user acknowledged his registration from the entered email

Then: the user has a profile in the portal

Feature: Request for a new language

Scenario: the user wants to use another language, not the current supported ones

Given: the railway ticket portal login page is opened

When: the user clicks on the button to change a language

AND: the user is looking for 'Arabic'

AND: the language is missing

AND: the user is clicking the button 'Make a language request'

AND: the user enters his/hers preference

Then: the request is sent to the dev team

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LAB 2: Static Testing

Team work with Vesi

Task 1:

