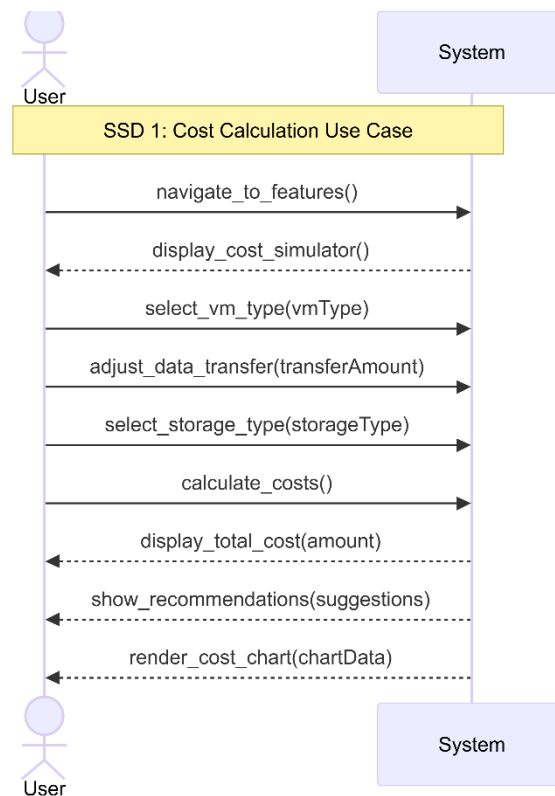


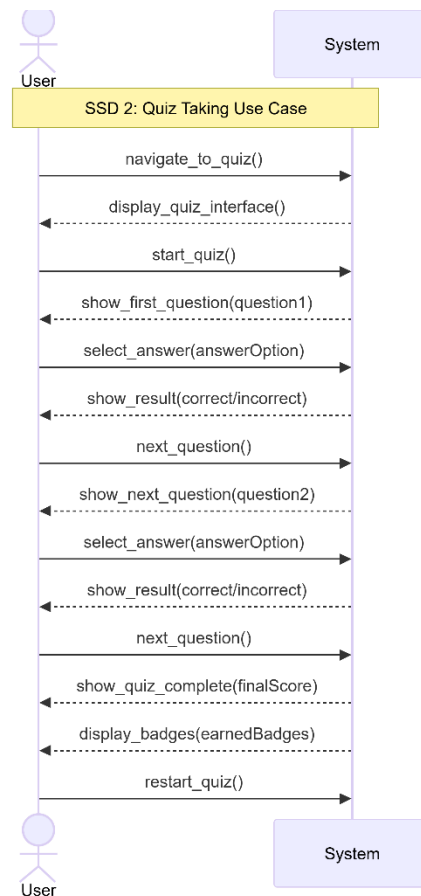
SSD 1: Cost Calculation Use Case

In this scenario, the user opens the cost simulator page and interacts with multiple configuration options, such as selecting the virtual machine type, adjusting the monthly data transfer amount, and choosing the storage type. Once all parameters are set, the user triggers the cost calculation. The system processes these inputs, calculates individual component costs, aggregates them into a total monthly cost, and generates optimization recommendations. A cost breakdown chart is rendered using Chart.js, and all results are displayed back to the user for review.



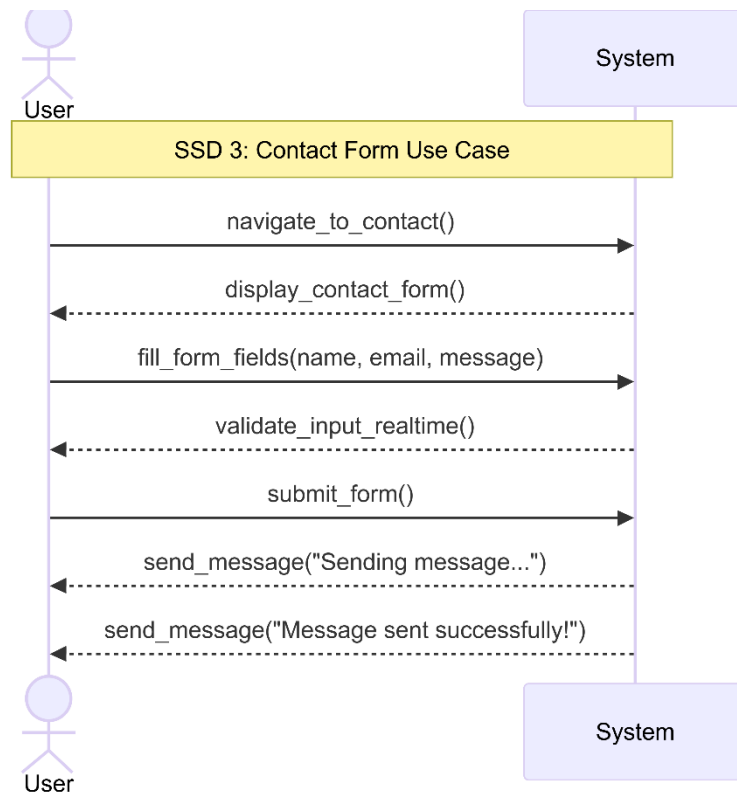
SSD 2: Quiz Taking Use Case

The user navigates to the quiz page and begins the interactive quiz by clicking “Start Quiz.” For each question, the user selects an answer, receives immediate feedback on whether the answer was correct or incorrect, and moves to the next question. This process repeats until all questions have been answered. At the end, the system calculates the final score, determines which achievement badges have been earned, and displays the results. The user then has the option to restart the quiz to try again.



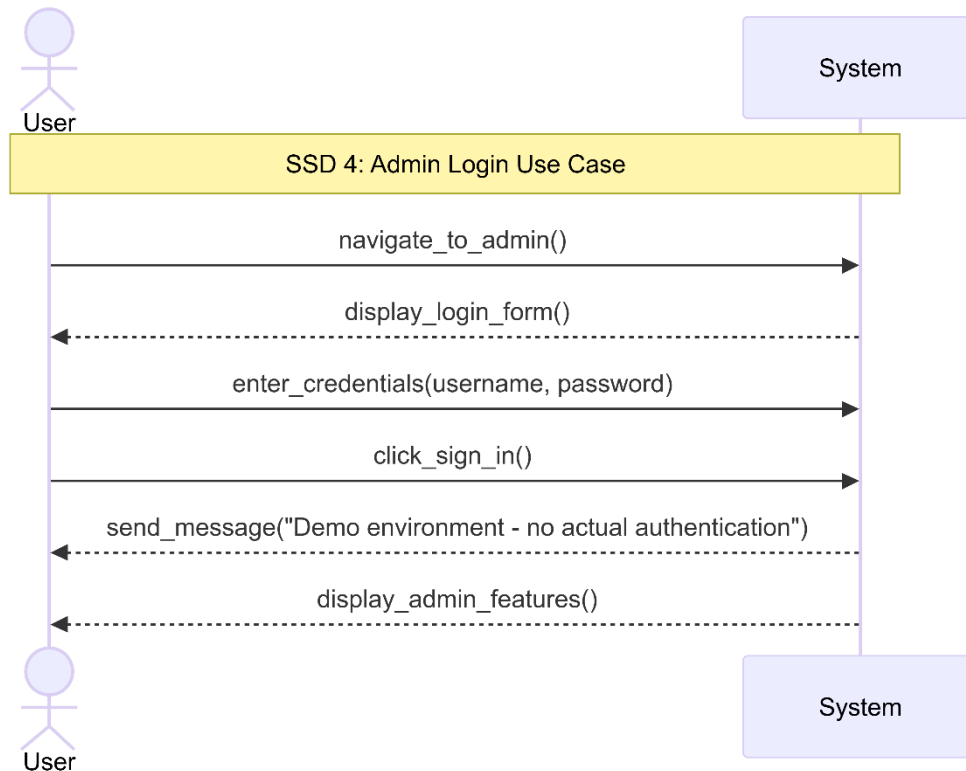
SSD 3: Contact Form Use Case

In this use case, the user visits the contact page and fills out the form with their name, email address, and message. The system performs real-time validation as the user types, ensuring that the required fields are completed correctly. When the user submits the form, the system either displays errors (if validation fails) or sends the data to the Formspree service for processing. Upon successful submission, the user sees visual confirmation messages indicating that the message has been sent.



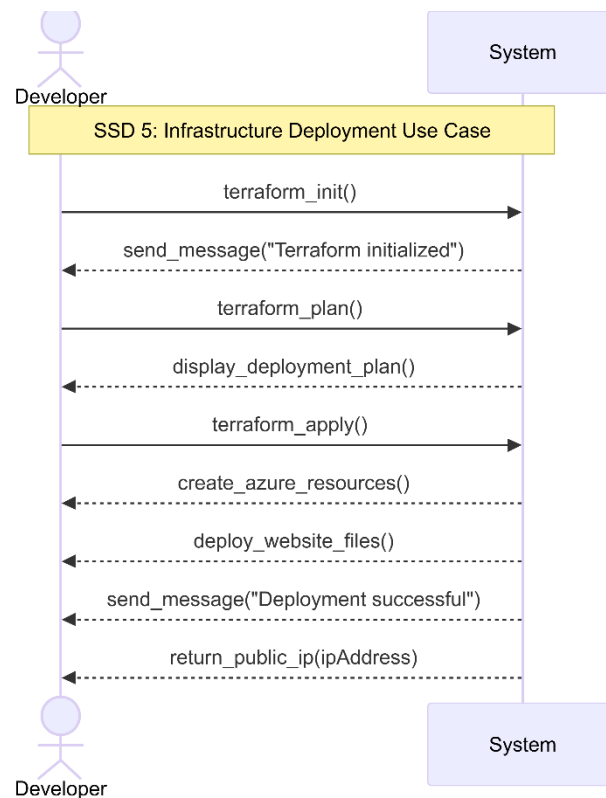
SSD 4: Admin Login Use Case

The user accesses the admin portal, where they are presented with a secure-looking login form. They enter their username and password and click the “Sign In Securely” button. The system validates the inputs only on the client side and displays a notice informing the user that this is a demonstration environment with no actual authentication. In this demo context, the system may still display placeholder admin features for preview purposes.



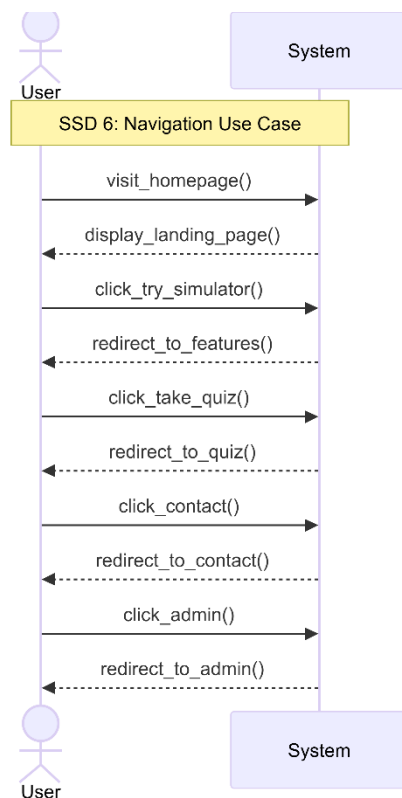
SSD 5: Infrastructure Deployment Use Case

A developer initiates the website deployment process using Terraform commands: `terraform init`, `terraform plan`, and `terraform apply`. The system (via Terraform) interacts with Azure to create necessary infrastructure components, such as a resource group, virtual network, network security group, public IP, and virtual machine. Once the infrastructure is provisioned, the system deploys the website files to the VM's web server. The developer receives confirmation that deployment was successful along with the public IP address to access the live site.



SSD 6: Navigation Use Case

The user explores the website starting from the homepage, interacting with various navigation elements. By clicking specific links or buttons, the user is redirected to the cost simulator page, the quiz interface, the contact form, and finally the admin portal. Each navigation action triggers a request to the server, and the system responds by loading the appropriate page, ensuring a smooth browsing experience.



SSD 7: Cost Optimization Recommendation Use Case

In this scenario, the user configures the system with a resource setup that results in high costs, such as selecting a large VM type or premium storage options. The user then requests an optimization analysis. The system evaluates the current configuration and returns specific recommendations for reducing costs, such as using a smaller VM or switching to a more cost-efficient storage type. The user applies these recommendations, after which the system recalculates the total cost and displays the new, optimized monthly estimate.

