

Assignment2 – JavaScript & Bootstrap

1. Bootstrap components and features used

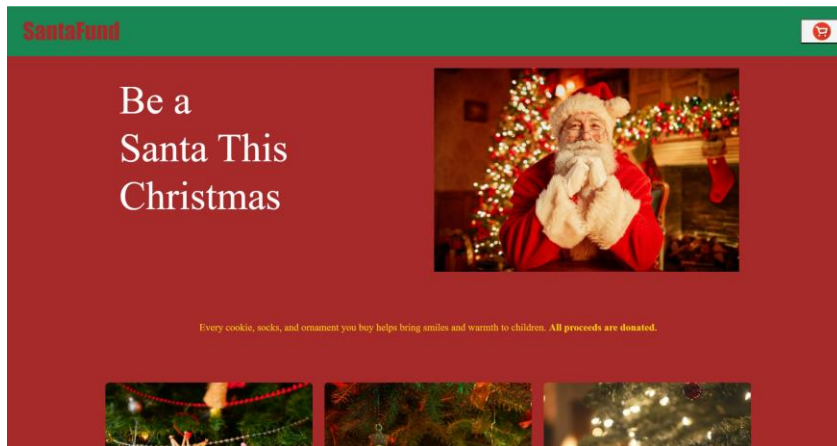
Bootstrap was used to build the layout of the webpage in a simple and organized way. The navbar at the top uses Bootstrap's default navbar structure, so it stays fixed at the top of the page and shows the brand name and the cart button. The whole page layout uses Bootstrap's grid system. Containers, rows, and columns were used to place the product cards in four columns per row. The first big section at the top with the title and image also uses two columns: one for the text and one for the Santa image. Images use the `img-fluid` class so they resize correctly on different screens. Buttons also follow Bootstrap's basic button style, and only the colors were changed in the CSS. The checkout form uses `form control` for each input field, which makes the form look clean without extra styling.

2. How the javascript code works

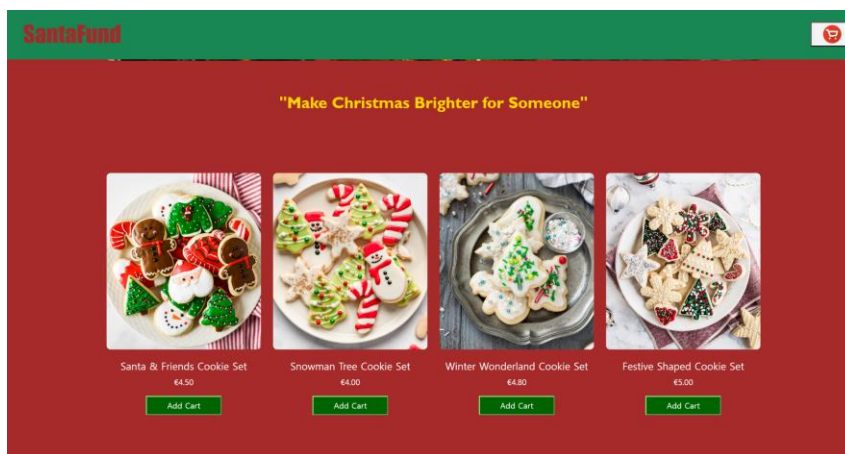
When the user clicks "Add Cart" the code finds the product's name, price, and image from the HTML using DOM methods. The product is then added to an array. If the same product is added again, the code increases its quantity instead of creating a new item. The cart area is updated by creating elements with `createElement()` and adding them to the list. Each item has a delete button and "+ / -" buttons. The idea for the quantity buttons was inspired by a counter example from GeeksforGeeks. During checkout, the code validates the user's input. It checks that every field is filled, that the phone number contains only digits, and that the email format is correct. The email check uses a simple regex pattern often shown in W3Schools examples. ZIP code length is also checked. The price calculation first makes a subtotal. Then, if the user has 3 or more items, a 10% discount is applied. The total quantity is calculated using the `reduce()` method, based on an example from MDN Web Docs. After that, tax is added and the final total is created. The summary page is generated using a template literal so that multiple lines of HTML can be written easily. This method was referenced from MDN and W3Schools examples. When the user clicks the Final Confirm button, the cart is cleared, all form fields are reset, and the confirmation section is hidden again.

3. Screenshots of each step of the process

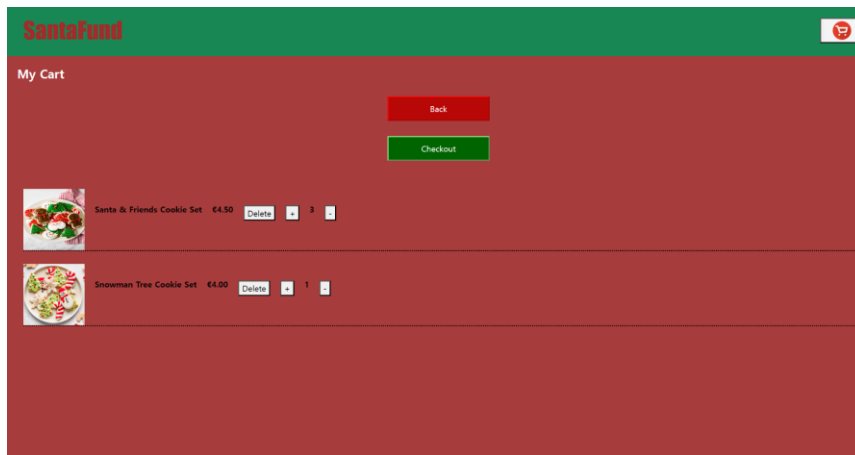
1. Main landing section with the title and Santa image, introducing the webpage and its purpose.



2. Product list section showing items in a four-column layout, where each item can be added to the cart.



3. Cart section showing the items added. Each item can be deleted or the quantity can be changed with the plus and minus buttons.



4. Checkout section with input fields. The user can enter name, phone, email, and address before moving to the summary page.

5. Order summary section showing the customer information, the items, the discount, and the final total before confirming the order.