LAB 9 – JavaScript

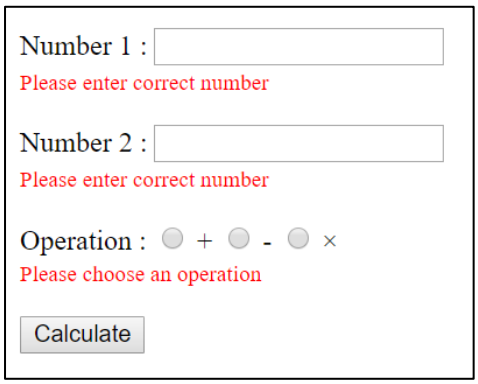
At the end of this lab, students should be able to:

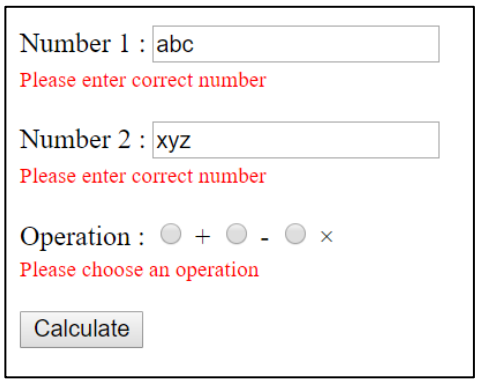
- Insert JavaScript codes into a HTML document.
- Retrieve data from forms to be processed and display the required output.
- Incorporate JavaScript built-in functions as well as user defined functions to process data from forms.
- Use getElementById and HTML DOM innerHTML property in JavaScript codes.
- Validate forms before data is being retrieved for processing.

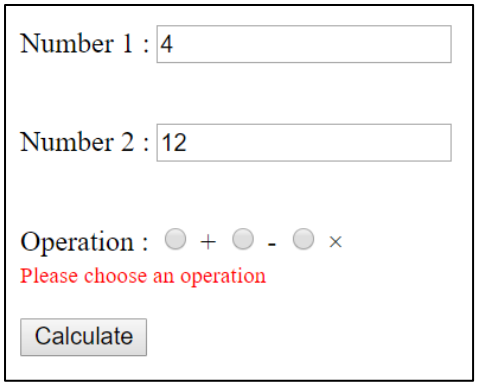
Question 1

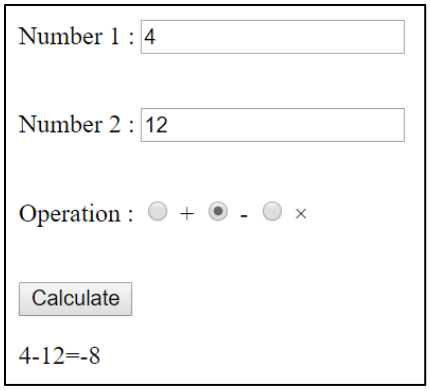
This JavaScript program will do a chosen mathematical operation on two numbers.

- When the button is clicked, it will trigger function *validate()*.
- In function *validate()*:
  - Get the 2 numbers and the type of mathematical operation from the form.
  - Make sure the numbers are filled and only numbers are accepted. Display an error message otherwise.
  - If all values from the form are valid, call function *calculate(…)* and pass both numbers and operation as arguments.
- In function *calculate(…)*:
  - Use a switch case statement to identify the operation and calculate the result.
  - Display the result at the appropriate place as shown below.





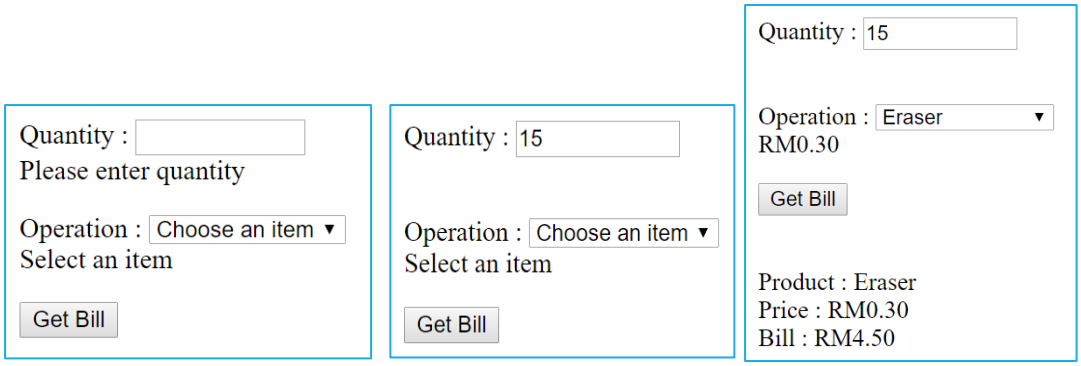




Question 2

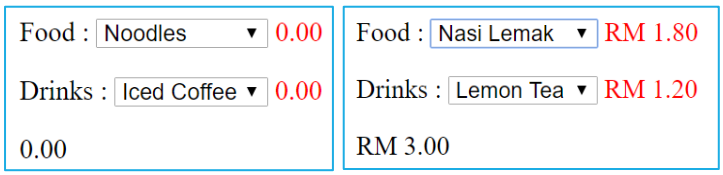
This JavaScript program will calculate the bill for the purchase of stationery.

- When the button is clicked, it will trigger function *check()*.
- In function *check()*:
  - Get the quantity and item from the form.
  - Make sure the values are filled. Display an error message otherwise.
  - Use a switch case statement to identify the stationery name and price. You may set your own price for the items.
  - If all items were filled correctly, call function *get_bill(…)* and pass quantity, item name and item price as arguments.
- In function *get_bill(…)*:
  - Calculate the bill for the purchase.
  - Display as shown below.



Question 3

This program will show the total bill automatically when the user chooses the food and drinks. You may set any price for the food and drinks.



- In function *menu()*:
  - Get the data from the form.
  - Use a switch case statement to identify the food price. You may set your own price for the food.
  - Use another switch case statement to identify the drink price. You may set your own price for the drinks.
  - Display the prices at the allocated spaces.
  - Calculate the bill and display at the specific location.

Question 4

This JavaScript program will convert Ringgit Malaysia value to American Dollar, Australian Dollar and Singapore Dollar as the user drags the slider to the left or right.

- In function *convert()*:
  - Get the ringgit value from the range input.
  - Write the formulas to convent Ringgit Malaysia to other currencies.
  - Display the converted value at the specific locations.
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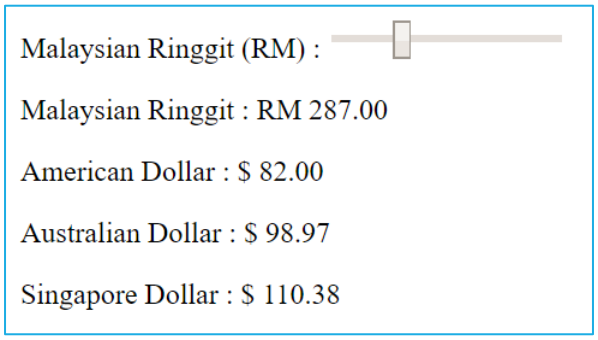
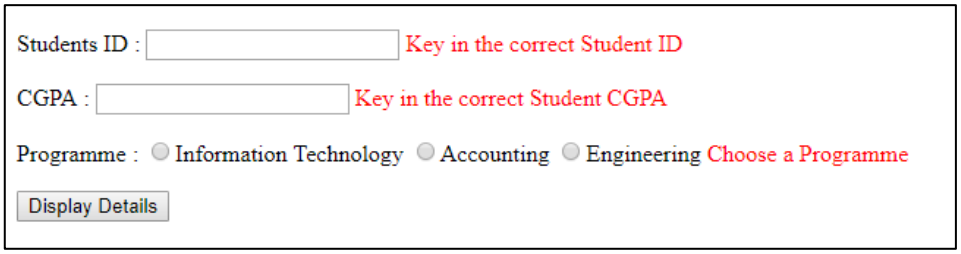
- Currency value:
  - 1 USD = RM3.90
  - 1 AUSD = RM 2.90
  - 1 SGD = RM 2.60

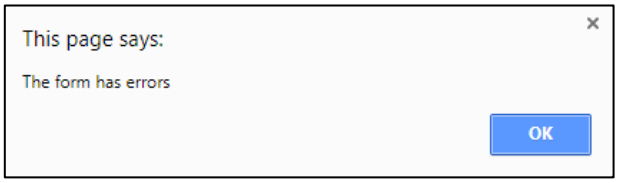


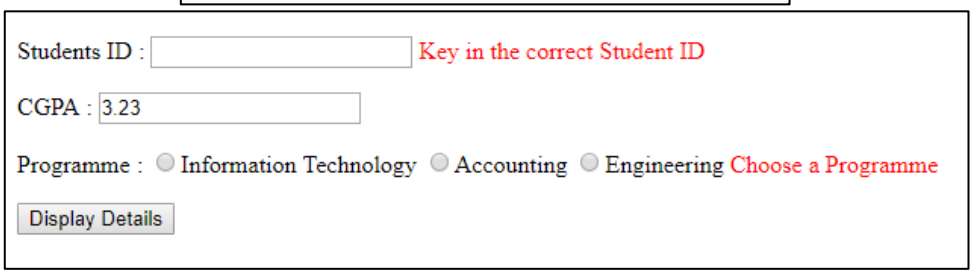
Question 5

This program will take in student's details and display them on the browser. The program will display error messages if the data entry is wrong.

- Once the button is clicked, it will call function *validate()*.
- In function *validate()*:
  - Get values of student id, cgpa and programme.
  - Students id must not be null and it must have 10 digits.
  - Student cgpa must not be null and must be digits.
  - The user must choose a programme.
  - If everything is correctly filled in, function *display()* will be called. Otherwise an alert "*The form has errors*" will be displayed with all other error messages.







- In function *display(…)*:
  - Display all details on the screen.