**Unit 11 Lab – Working with user data**

**Exercise 1 – Factorial**

1. Create a new folder called “unit 11” containing a folder called exercise-1-factorial
2. Replicate the factorial exercise previously completed but using a slider (<input type=”range”>) for user input
3. update the page on the ‘change’ event
4. display the output as shown below and using template strings

A screenshot of a number factorial

Description automatically generated

**Exercise 2 – Age Calculator**

1. Create a new folder called exercise-2-age-calculator
2. In the html page, create a form containing an input element for the birthday and a button element as shown
3. Set the type, min, max, required and value for the input element
4. Create a new FormData() object and use it to get the value of the birthday field
5. You will need to split the two dates into their year, month and day parts and then subtract them. Additional logic is required to get the correct month and day if the birthday is later than today’s month and day
6. Use a string template when constructing the output html
7. Advanced
   1. Set the value of the max and value attributes of the input element using setAttribute(). Use yesterdays date in conjunction with ‘toISOString().split('T')[0]’ to set the value correctly

A screenshot of a calculator

Description automatically generated

**Exercise 3 – Add keypad support to calculator**

1. Create a new folder called exercise-3-keyboard-support-calculator
2. Copy the code from demos/web-forms-calculator
3. Create an init() function and move the event handler code into this function
4. In the init() function, add a new event handler for the ‘keydown’ event to allow numeric input via the keyboard. Currently the demo will only work using the mouse
5. Check out <https://developer.mozilla.org/en-US/docs/Web/API/KeyboardEvent/code> for details on how to do this
6. Hint: in the event handler use a switch statement to check the value of event.key and depending on the key value, call the appropriate function:
   1. E.g. if event.key = 1 then call the appendToDisplay() function and pass event.key as a parameter

**Exercise 4 – Simple to-do List**

1. Create a new folder called exercise-4-simple to-do list
2. The layout is shown below

A screenshot of a computer

Description automatically generated

1. The demo consists of a basic form (fields are title, description and priority) and submit and reset buttons. The priority dropdown has three values (High, Medium, Low)
2. The submitted to-do items are displayed in a table at the top of the page
3. Clicking on submit button retrieves the form details using FormData() and then adds a new row to the table with the form values
4. Clicking on the delete button removes the row from the table
5. Use the styles.css file from the web-forms-styling demo. Add additional classes are required