Task 1: Review Requirements

Question 2

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| ID | User Story ID | Issue / Defect |
| 1 | 1 | What constitutes a name is not provided. We need to know if it should be full name as one input or first name and last name as two inputs. |
| 2 | 3 | We need to know what Credit/Debit Card providers we accept. |
| 3 | 4 | What constitutes a valid name is not provided. For example some cultures may have very short or very long names. |
| 4 | 6 | The RGB and hex values for the pink colour do not match. #E70064 is the corresponding hex value for RGB 231,0,100. |
| 5 | 7 | The font size is not provided. More clarity is needed in relation to the forms positioning, is it a centred pop-up modal, or is it fixed to the centre of the page. |
| 6 | 8 | While most validation could be done on page. We may want to validate that the user has not already booked this course, which would likely need a call to the back-end. |
| 7 | 9 | The Web Content Accessibility Guidelines 1.0 was superseded on the 18th May 2021, the new Web Content Accessibility Guidelines 2.1 may be more appropriate. |
| 8 | 10 | Based on the Web Content Accessibility Guidelines colour should not be the only visual way of displaying information. Correct field and errors should also have text accompanying the DN colours. |
| 9 | 11 | Each field should allow different values to be entered. We need to know the culture of our target customers to decide what characters we support in the name field. We should clarify that email addresses often contain numbers, so we should allow them in the email field. Finally, as card numbers only contain numbers we should not allow users to enter anything except numbers. |
| 10 | 12 | Clarify that debit cards should also conform to the LUHN algorithm. |
| 11 | 13 | The design of the form does not suit itself to vertical devices such as phones. |
| 12 | 14 | This is a serious misuse of customer data and should not be implemented. Assuming this data was desired for analysis of customer acquisition/sign up metrics, a dashboard should be created for the CTO that doesn’t use sensitive customer data. |

Question 3

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| ID | Issue ID | Assumption |
| 1 | 1 | We can assume that the input should be the full name. If incorrect, changing to first name and last name should be minimal effort in the future. |
| 2 | 2 | We can assume that Mastercard and Visa are accepted and add others such as Amex and Discover when provided more information. |
| 3 | 3 | As we have a full name input we can assume any letters or spaces between the length of 3 and 35 are valid. |
| 4 | 4 | As the provided hex code for the colour pink is close to the corresponding hex code for the pink RGB value, we can assume it is an error and use #E70064 as the correct hex value. |
| 5 | 5 | We can try and make a reasonable assumption about the font size and start creating the form as requested centred horizontally and vertically. However this should not be deployed to production until clarified. |
| 6 | 6 | We can continue with validating the name, email and card number on page. While waiting for clarifying information about other validations. |
| 7 | 7 | We want to keep up to date with the latest guidelines so we should use the 2.1 version. |
| 8 | 8 | We can add and error or success message to the form field on completion, while waiting for designers to inform us of an updated design that includes what visual non-colour errors should look like. |
| 9 | 9 | We can assume that name can be letters, email can be alphanumerical and card can be numbers. We should also ensure that the back-end team also sanitises any user input that we send to them. |
| 10 | 10 | Assume that both debit and credit cards need to conform to the LUHN algorithm until we hear otherwise. |
| 11 | 11 | We can design the form as provided but highlight that a form with information presented vertically will suit a wider range of devices. |
| 12 | 12 | We cannot implement this feature for the CTO. We should wait to hear why the CTO wanted this information and then build a solution for them that does not compromise sensitive user data. |

Question 4

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| Test Case ID | User Story ID | Acceptance Condition | Precondition | Test Data | Step / Instructions | Expected Results | Actual Results | Pass / Fail | Notes |
| 1 | 1 | Henry Derbyshire is a valid name. | Web-page showing form is loaded. Form shows an input field labelled name. | Henry Derbyshire | Enter “Henry Derbyshire” into the name field. | Shows an DN pink until a the length of the input is greater than 2, then shows DN green including when leaving the input field. | Shows an DN pink until a the length of the input is greater than 2, then shows DN green including when leaving the input field. | Pass |  |
| 2 | 2 | [hello@world.com](mailto:hello@world.com) is a valid email address | Web-page showing form is loaded. Form shows an input field labelled email. | [hello@world.com](mailto:hello@world.com) | Enter “[hello@world.com](mailto:hello@world.com)” into the email field. | Shows a DN pink error until the final “o” is typed then shows DN green, including when leaving the email field. | Shows a DN pink error until the final “o” is typed then shows DN green, including when leaving the email field. | Pass |  |
| 3 | 3 | 4775954920171827 is a valid Visa card number | Web-page showing form is loaded. Form shows an input field labelled card. | 4775954920171827 | Enter “4775954920171827 “ into the card field. | Shows a DN pink error until the last digit is typed then shows DN green, including when leaving the card field. | Shows a DN pink error until the last digit is typed then shows DN green, including when leaving the card field. | Pass |  |
| 4 | 4 | H3nry D3rbyshire is not a valid name. | Web-page showing form is loaded. Form shows an input field labelled name. | H3nry D3rbyshire | Enter “H3nry Derbyshire” into the name field. | Shows a DN pink error the whole time typing, continuing after leaving the input field. | Shows a DN pink error until the third value is typed then shows DN green | Fail | Need to update the name validation function to only accept letters. |
| 4 (1) | 4 | H3nry D3rbyshire is not a valid name. | Web-page showing form is loaded. Form shows an input field labelled name. | H3nry D3rbyshire | Enter “H3nry Derbyshire” into the name field. | Shows a DN pink error the whole time typing, continuing after leaving the input field. | Shows a DN pink error the whole time typing, continuing after leaving the input field. | Pass | Updated name validation function to test that only letters are input using regex. |
| 5 | 4 | Abc is a valid name. | Web-page showing form is loaded. Form shows an input field labelled name. | Abc | Enter “Abc” into the name field. | Shows a DN pink error until “c” is typed then shows DN green including when leaving the field. | Shows a DN pink error until “c” is typed then shows DN green including when leaving the field. | Pass |  |
| 6 | 4 | Xy is not a valid name. | Web-page showing form is loaded. Form shows an input field labelled name. | Xy | Enter “Xy” into the name field. | Shows a DN pink error the whole time typing, continuing after leaving the input field. | Shows a DN pink error the whole time typing, continuing after leaving the input field. | Pass |  |
| 7 | 4 | “This name is too long to be a valid input” is not a valid name. | Web-page showing form is loaded. Form shows an input field labelled name. | This name is too long to be a valid input | Enter “ This name is too long to be a valid input” into the name field. | Shows a DN pink error until the 3rd character is typed then shows DN green until the 36th character is typed. Then shows DN pink including when leaving the input field. | Shows a DN pink error until the 3rd character is typed then shows DN green until the 36th character is typed. Then shows DN pink including when leaving the input field. | Pass |  |
| 8 | 5 | hello..@world.com is not a valid email address. | Web-page showing form is loaded. Form shows an input field labelled email. | hello..@world.com | Enter “hello..@world.com” into the email field. | Shows a DN pink error the whole time typing, continuing after leaving the input field. | Shows a DN pink error the whole time typing, continuing after leaving the input field. | Pass |  |
| 9 | 5 | h[ello.world@test.com](mailto:Hello.world@emai.com) is a valid email address. | Web-page showing form is loaded. Form shows an input field labelled email. | hello.world@test.com | Enter “[hello.world@test.com](mailto:hello.world@test.com)” into the email field. | Shows a DN pink error until the final “o” is typed then shows DN green, including when leaving the email field. | Shows a DN pink error until the final “o” is typed then shows DN green, including when leaving the email field. | Pass |  |
| 10 | 5 | [hello\_world123@test.co.uk](mailto:hello_world123@test.co.uk) is a valid email address | Web-page showing form is loaded. Form shows an input field labelled email. | [hello\_world123@test.co.uk](mailto:hello_world123@test.co.uk) | Enter “[hello\_world123@test.co.uk](mailto:hello_world123@test.co.uk)” into the email field. | Shows a DN pink error until the final “o” is typed then shows DN green, including when leaving the email field. | Shows a DN pink error until the final “o” is typed then shows DN green, including when leaving the email field. | Pass |  |
| 11 | 6 | 5480412455084793 is a valid mastercard number. | Web-page showing form is loaded. Form shows an input field labelled card. | 5480412455084793 | Enter “5480412455084793” into the card field | Shows a DN pink error until the final digit is typed then shows DN green, including when leaving the card field. | Shows a DN pink error until the final digit is typed then shows DN green, including when leaving the card field. | Pass |  |
| 12 | 6 | 5541128140923958 is a valid mastercard number | Web-page showing form is loaded. Form shows an input field labelled card. | 5541128140923958 | Enter “5541128140923958” into the card field. | Shows a DN pink error until the final digit is typed then shows DN green, including when leaving the card field. | Shows a DN pink error until the final digit is typed then shows DN green, including when leaving the card field. | Pass |  |
| 13 | 6 | 5541125640923123 is not a valid mastercard number. | Web-page showing form is loaded. Form shows an input field labelled card. | 5541125640923123 | Enter “5541125640923123” into the card field. | Shows a DN pink error the whole time typing, including when leaving the card field. | Shows a DN pink error the whole time typing, including when leaving the card field. | Pass |  |
| 14 | 6 | 4757307669744639 is a valid visa card number. | Web-page showing form is loaded. Form shows an input field labelled card. | 4757307669744639 | Enter “4757307669744639” into the card field. | Shows a DN pink error until the final digit is typed then shows DN green, including when leaving the card field. | Shows a DN pink error until the final digit is typed then shows DN green, including when leaving the card field. | Pass |  |
| 15 | 6 | 3357307669944639 is not a valid visa card number. | Web-page showing form is loaded. Form shows an input field labelled card. | 3357307669944639 | Enter “3357307669944639” into the card field. | Shows a DN pink error the whole time typing, including when leaving the card field. | Shows a DN pink error the whole time typing, including when leaving the card field. | Pass |  |
| 16 | 10 | Valid input in all fields show DN green. | Web-page showing form is loaded. Form shows all three input fields. | Henry Derbyshire, [hello@world.com](mailto:hello@world.com), 4775954920171827 | Enter “Henry Derbyshire” into the name field, enter “[hello@world.com](mailto:hello@world.com)” into the email field, enter “4775954920171827” into the card field. | After leaving each field DN green should persist to show success in each field. | After leaving each field DN green persists to show success in each field. | Pass |  |
| 17 | 10 | Invalid input in all fields show DN pink. | Web-page showing form is loaded. Form shows all three input fields. | H3nry D3rbyshire, [hello..@world.com](mailto:hello@world.com), 5541125640923123 | Enter “H3nry D3rbyshire” into the name field, enter “[hello..@world.com](mailto:hello@world.com)” into the email field, enter “5541125640923123” into the card field. | After leaving each field DN pink should persist to show an error in each field. | Shows a DN green success for the name field, DN pink for both the email and card field. | Fail | Need to update the name validation function to only accept letters. |
| 17 (1) | 10 | Invalid input in all fields show DN pink. | Web-page showing form is loaded. Form shows all three input fields. | H3nry D3rbyshire, [hello..@world.com](mailto:hello@world.com), 5541125640923123 | Enter “H3nry D3rbyshire” into the name field, enter “[hello..@world.com](mailto:hello@world.com)” into the email field, enter “5541125640923123” into the card field. | After leaving each field DN pink should persist to show an error in each field. | After leaving each field DN pink should persist to show an error in each field. | Pass | Updated name validation function to test that only letters are input using regex. |
| 18 | 12 | 3357307669944631 does not conform the to LUHN algorithm. | Web-page showing form is loaded. Form shows an input field labelled card. | 3357307669944631 | Enter “3357307669944631” into the card field. | Shows a DN pink error the whole time typing, including when leaving the card field. | Shows a DN pink error the whole time typing, including when leaving the card field. | Pass |  |
| 19 | 12 | 5541128140923958 does conform the to LUHN algorithm. | Web-page showing form is loaded. Form shows an input field labelled card. | 5541128140923958 | Enter “5541128140923958” into the card field. | Shows a DN pink error until the final digit is typed then shows DN green, including when leaving the card field. | Shows a DN pink error until the final digit is typed then shows DN green, including when leaving the card field. | Pass |  |

Question 7:

a.

Working from User Stories was helpful, often the hardest part of problems is starting which user stories solves for you. However not being able to ask clarifying question makes the process slightly more uncomfortable, you are unable to tell if the user stories are requesting something very specific for a reason or if it is a misunderstanding.

b.

TDD made the whole process much easier, it forced me to think of edge cases and how I would handle input and errors before I wrote any code. The only frustration was not being able to test anything automatically, having to save and refresh the web page every time you want to see a change slows down the development process.

c.

I have learned that TDD is a useful tool for solving a problem and as you can always change and add tests, it is not a restriction as I first thought. I have also learned that it is easier to write your own code first and then try and improve it from solutions such as stack overflow, instead of trying to find a solution to the whole problem and then tweaking it slightly to fit your needs.

d.

I would have started off designing the form for mobile devices and once completed then make sure it works with larger screen sizes. I would have also researched how to write cleaner CSS code or what standard CSS class names should be as I feel it is already slightly confusing and unstructured.