Day 3 Task

**MVP:**

For this task we would like you to imagine you are working as a tester on a HMRC team called Digital Self-Assessment Submission.

Your team has been asked to produce a new feature on the HMRC online portal allows users to:

• Enter employment income

• Upload a PDF of their P60

• Submit their return for the current tax year

This is the information you have received as a part of the development team (made up of

developers and testers):

As a taxpayer, I want to upload my P60 and enter my income manually so that I can

complete my self-assessment online.

Acceptance Criteria:

1. User must be able to enter a numeric value for income.

2. Upload must only accept a PDF file less than 5MB.

3. Submission button remains disabled until all required fields are valid.

4. Upon submission, user receives a confirmation message and reference number.

*1. Test Case Design*

*Design test cases based on the information above. Make sure to include:*

*• Positive tests (happy path)*

*• Negative tests (invalid input or edge case)*

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| --- | --- | --- | --- | --- |
| Test Case ID | Test Scenario | Preconditons | Test Steps | Expected Result |
| TC\_Income\_01 | TS\_Income | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter user income as numerical value. | User income accepted as valid input. |
| TC\_Income\_02 | TS\_Income | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter invalid input for income (symbol or letters) | Error Message stating ‘Please enter an income in numerical format’. |
| TC\_PDF\_01 | TS\_PDF | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter valid user income as numerical value. 3. Upload a PDF file less than 5MB. | PDF file should be successfully uploaded to the portal. |
| TC\_PDF\_02 | TS\_PDF | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter a valid user income as numerical value. 3. Upload a PDF file at 5MB. | Error message stating ‘Unable to upload, file size is not below 5MB’ |
| TC\_PDF\_02 | TS\_PDF | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter a valid user income as numerical value. 3. Upload a PDF file over 5MB. | Error message stating ‘Unable to upload, file size is not below 5MB’ |
| TC\_Submit\_01 | TS\_Submit | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter a valid user income as numerical value. 3. Upload a PDF less than 5MB 4. Submit form. | Submission button will be enabled and form will submit successfully. |
| TC\_Submit\_02 | TS\_Submit | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter a valid user income as numerical value. 3. Upload a PDF over 5MB 4. Attempt to submit form. | Error message regarding PDF file. Submission button should not be enabled. |
| TC\_Submit\_03 | TS\_Submit | User has logged in and navigated to HMRC online portal. | 1. Navigate to new Feature. 2. Enter an invalid income input (symbol or letters). 3. Upload a PDF less than 5MB. 4. Attempt to submit form. | Error message regarding invalid income input. Submission button should not be enabled. |
| TC\_Submit\_04 | TS\_Submit | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter an invalid income input. 3. Upload a PDF file larger than 5MB. 4. Attempt to submit form. | Error messages for both invalid income and PDF file size.  Submission button should not be enabled. |
| TC\_Submit\_05 | TS\_Submit | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Leave income field empty. 3. Upload a PDF file less than 5MB. 4. Attempt to submit form. | Error Message for ‘Required fields have not been filled’.  Submission button should not be enabled. |
| TC\_Submit\_06 | TS\_Submit | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter a valid user input for income. 3. Leave PDF file not uploaded. 4. Attempt to submit form. | Error Message for ‘Required fields have not been filled’.  Submission button should not be enabled. |
| TC\_Submit\_07 | TS\_Submit | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Leave income field empty. 3. Leave PDF file not uploaded. 4. Attempt to submit form. | Error Message for ‘Required fields have not been filled’.  Submission button should not be enabled. |
| TC\_E2E\_01 | TS\_E2E | User has logged in and navigated to HMRC online portal. | 1. Navigate to new feature. 2. Enter a valid user income as numerical value. 3. Upload a PDF less than 5MB 4. Submit form. 5. Confirm confirmation message and reference number. | Submission button will be enabled and form will submit successfully. User should receive a confirmation message and reference number. |

*2. Bug Discovery*

*During exploratory testing, a bug is discovered. Here are the details:*

*When a user uploads a file over 5MB, there is no error message, and the submission*

*proceeds with no attached file.*

|  |  |
| --- | --- |
| **Defect ID** | ETB-24683 |
| **Title/Summary** | ETB-24683 - Invalid file size uploaded, submission should not be possible. |
| **Reported By** | Adam Chery |
| **Reported Date** | 14/05/25 |
| **Module/Feature** | Digital Self-Assessment Submission |
| **Environment** | UAT |
| **Priority (Commercial)** | High |
| **Steps to Reproduce** | 1. Navigate to new feature. 2. Enter a valid user income as numerical value. 3. Upload a PDF over 5MB 4. Submit form. |
| **Expected Result** | Error message regarding PDF file. Submission button should not be enabled. |
| **Actual Result** | No error message regarding file size, Submission button becomes enabled and proceeds with no attached file. |
| **Attachments/Evidence** | ETB-24683 - Invalid file size uploaded.doc |
| **Assigned To** | Dev Team |
| **Status** | Assigned |
| **Resolution** | Fix |

*3. Reflection*

**1. When would this bug be addressed in Software Development Lifecyle (SDLC) /**

**Software Testing Lifecyle (STLC)?**

SDLC – Test phase within the SDLC. Depending on Model could be during next sprint.

STLC – Test Execution within STLC. Likely within System Testing.

**2. How would a regression test ensure valid uploads still work?**

Regression testing would take place after any feature change to the code base. In regression testing it is pertinent to cover the test cases that could have been impacted by the changes in code, and ensure that previously developed and tested software still works.

Checking all original features are working since the code change would include checking valid uploads.

**Extension:**

1. *How did you prioritise which tests to write?*

I tried to cover all functional requirements, whilst isolating into separate scenarios. Submission based test cases became the priority as the form was not able to be submitted without the required fields being valid, as such my other scenarios for income, PDF and confirmation message became smaller with a positive test whilst making the tests linear to allow for any bugs to be confirmed earlier following the flow of using the feature that will affect later test cases.

1. *What is the value of early testing here?*

It allows for important issues to be found earlier in the SDLC. Early bugs such as the example in MVP.2 can be detected and resolved sooner, or even noted in advance that it could be an issue. It allows for a higher quality of work to be created and the product to be more stabilised before possible integrations.

**Research:**

1. How could test automation be used in this scenario?

Automation could be used for sanity/regression testing of the features that are known to be stable with no defects found currently, this will allow for faster testing after any changes to the code base or any new implementations/integrations.

1. How did you determine the root cause of the failure?

I determined the root cause of the failure to be a failure in the code by ensuring that file types of different sizes were utilised to ensure all size segments were covered.