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SCANNING THE FORMS

SCANNING THE FORMS IN THE ARTS LEARNING CENTER

This subsection will cover how to scan the students completed forms in the Arts Learning Center.

1. Load the student’s forms into the Scanner (recommended to limit scanning to 100 forms at a time).
2. On the Windows Desktop, open the HP Smart Document Scan Software application.
3. In the scanning application, select the FormScanner Form Scan from the Scan Profiles. Click scan to scan all forms.
4. Once the forms have finished scanning, click Done.
SCANNING THE FORMS USING OTHER SCANNING DEVICES

The scanning device may be a personal or office scanner such that it can scan into Black and White JPEG images. Refer to the pro tips below to minimize error when scanning.

Pro Tips:

1. The forms may be scanned by any scanning device.
2. The forms must be scanned to individual JPEG images (one form per image).
3. The forms must be scanned with a resolution of 300ppi.
4. The forms should be scanned to Black and White to minimize error when processing.
5. The images should be input into a designated folder upon scanning.

If you have any questions or concerns about scanning the forms, please contact the Arts Learning Center (arts.helpdesk@ubc.ca) for assistance.

PROCESSING THE FORMS IN FORMSCANNER

This section will cover how to load a FormScanner Form Template, load images in FormScanner, and process the results into an Excel file.

1. Open the FormScanner Application.
2. Click on Template on the top menu bar, and select Load saved template from the drop-down menu.

![FormScanner Application](image)

3. Select the FormScanner Template given from the Arts Learning Center for your Forms, and click Open.

4. Click the folder on the top menu bar, or click on File in the top menu bar and select Open Images.
5. Select all Images of the student’s completed forms and click **Open**.

![Image of selecting images]

6. Click on the play button to process the forms.

![Image of FormScanner 1.1.2]

7. Save the CSV file.

---

**ANALYZING THE FORMSCANNER DATA**

This section will cover how to process the Excel data the FormScanner Application exports.

1. Open the Excel file containing the **FormScanner Data** (.CSV), and the **Analysis Excel file** given by Arts Learning Center.

2. In the **FormScanner Data file**, select all information in Column A from row 2 downwards. Copy this information.

![Screenshot of Excel file]
3. Paste the data into the **Analysis Excel file** in Column A, row 3.

<table>
<thead>
<tr>
<th>STUDENT NUMBER</th>
<th>QUESTIONS Q</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>

4. Enter the number of questions in the test into box C2.

5. The answer key in row 2 from column C onwards.

<table>
<thead>
<tr>
<th>STUDENT NUMBER</th>
<th>QUESTIONS Q</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td></td>
</tr>
</tbody>
</table>

6. Click the Analysis button on the top of the page.

---

**Answer Legend:**

- Correct
- Incorrect
- Unanswered

---

1. Copy and Paste the FormScanner Excel File into column A, row 3 and below.
2. Enter the Number of Questions into box C2.
3. Enter the Answer Key into Row 2 (Case Sensitive).
4. Click on this Button to Analyze Data.

The data will now be processed. The scores will be listed in column C from row 3 downwards.

---

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>B&amp;W</td>
<td>1243X548</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>B&amp;W</td>
<td>1234567</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>5</td>
<td>B&amp;W</td>
<td>100010</td>
<td>A</td>
<td>C</td>
<td>E</td>
</tr>
<tr>
<td>6</td>
<td>B&amp;W</td>
<td>12345678</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>7</td>
<td>B&amp;W</td>
<td>11111211</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>8</td>
<td>B&amp;W</td>
<td>12212111</td>
<td>C</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td>9</td>
<td>B&amp;W</td>
<td>33333339</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>
SCORE SHEET ATTRIBUTES

This section will contain definitions of the Score Sheet attributes.

QUESTION RATING

The Question Rating is the fraction of students who chose the correct answer on that question, and may also be referred to as the question difficulty.

AVERAGE TOP #

The Average Top # is the average score of the students in the top 25% of the test. The “#” is the number of students who belong to this section, and the average score is calculated for each question for these students.

AVERAGE BOTTOM #

The Average Bottom # is the average score of the students in the bottom 25% of the test. The “#” is the number of students who belong to this section, and the average score is calculated for each question for these students.

DISCRIMINATION

The Discrimination is the difference in the averages for the top and bottom quartiles for each question. A positive discrimination means the overall well-scoring students scored higher than the overall lower-scoring students, and a negative discrimination means the overall lower-scoring students scored higher than the overall well-scoring students.

ANSWER DISTRIBUTION

The Answer Distribution displays the number of each answer given for each question, and highlights the correct answer in green.
This section will cover the Student Report tab in the Excel analysis tool. The Student Report tab can be used to easily transfer the students scored on the test to Connect Grade Center.

1. Access the Student Report tab on the bottom of the Excel analysis file.

2. In this tab, enter your students first and last names, and associated student numbers into the respective column. This information may be downloaded from your Connect Grade Center.

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Student Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doe</td>
<td>John</td>
<td>12439548</td>
</tr>
<tr>
<td>Doe</td>
<td>John</td>
<td>12345678</td>
</tr>
</tbody>
</table>

2.1 Access your Connect course and go into the Full Grade Center

2.2 Create a new column in your Full Grade Center for the FormScanner test grades.

2.3 Hover over Work Offline in the top menu bar, and select Download.

2.4 In the Data section, select the Select Column option and choose the grade column for the test in the drop-down menu. Click Submit.

2.5 In the Connect Excel file, copy and paste the student information (Last Name, First Name, Student Number) into the FormScanner analysis file.
3. Click the button to match students’ scores with their student numbers.

The student numbers will be given their associated test scores. The analysis tool will leave an empty cell for students who did not complete the test.

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Student Number</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doe</td>
<td>John</td>
<td>12439548</td>
<td>11</td>
</tr>
<tr>
<td>Doe</td>
<td>John</td>
<td>12345678</td>
<td>10</td>
</tr>
<tr>
<td>Doe</td>
<td>John</td>
<td>10001000</td>
<td>4</td>
</tr>
<tr>
<td>Doe</td>
<td>John</td>
<td>12345678</td>
<td>10</td>
</tr>
<tr>
<td>Doe</td>
<td>John</td>
<td>11111211</td>
<td>20</td>
</tr>
<tr>
<td>Doe</td>
<td>John</td>
<td>12212111</td>
<td>10</td>
</tr>
<tr>
<td>Doe</td>
<td>John</td>
<td>33333339</td>
<td>9</td>
</tr>
</tbody>
</table>

If you have completed a Student Learning Outcomes Analysis (See SLO Analysis Section Below), click the second button to assign the SLO scores to each student in the Student Report tab.

*Click this Button to match Student Numbers with SLO Analysis Scores*
GRADING OPTIONS

This section will cover the Grading Options tab in the FormScanner Analysis Excel file. Access the Grading Options tab in the FormScanner Analysis Excel file.

CUSTOM GRADING WITH NO PARTIAL CREDIT

The first section (Rows 1-4) is used for assigning points given for correct, incorrect, and missing questions (points can be set to negative values).

1. Column B will assign general custom grading options to all questions, while column D and right will be custom grading for each individual question.

2. To recalculate the Score Sheet tab based on the Custom Grading Options, click on the button in row 7.

CUSTOM GRADING WITH PARTIAL CREDIT

The second section (rows 8-22) is used for calculating scores with partial credit.

1. The equation for calculating the partial credit is $1 - \frac{M*f_1 + I*f_2}{N}$, where $M$ is the number of missing answers, $I$ is the number of incorrect answers, and $f_1$ and $f_2$ are penalty factors defined by the professor (row 11 columns B, C, D).

Referring to the Partial Credit Equation above, the variable $N$ is equal to the number of correct answers if Strict* partial credit is used and $N$ is equal to 1 if Lenient** partial credit is used.

*Strict: No incorrect answers allowed

**Lenient: Missing and Incorrect answers allowed
2. Click on the desired type of partial credit button to recalculate scores in the Score Sheet tab.

Here is an example of how LENIENT PARTIAL CREDIT works:

<table>
<thead>
<tr>
<th>CORRECT:</th>
<th>GIVEN:</th>
<th>SCORE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

MULTIPLE TEST OPTIONS

The final section (rows 28-38) is used for grading multiple test keys.

1. The answer keys will be entered in rows 35 to row 37 (keys 1-3). There are 3 answer keys by default. If your test only includes two answer keys, you can leave the third key as default, as this will not interfere with the other answer keys grading.

2. Enter answers for the answer keys for question 2 and onwards. Do not alter the “Test Version” column (A, B, C) for Keys 1 through 3.

3. In the Custom Grading Options at the top of the tab, enter “0” in box D2 to give the answer key test version answer no points to the score.

4. To grade the forms according to their respective answer key, click on a button with the desired partial credit allowance.

*Strict: No incorrect answers allowed

**Lenient: Missing and Incorrect answers allowed
SLO ANALYSIS

This section of will cover the SLO Analysis tool in the FormScanner Analysis Excel file. This tool can be used to assess students learning according to how they perform in certain areas of the assessment.

1. Access the SLO Analysis tab on the bottom menu.

2. Describe each student learning outcome (SLO) analysis to be completed in column B. By default there are 3 SLO analysis rows. To eliminate an SLO analysis, select all information in that row and delete. To add another SLO analysis, add SLO-‘Letter’ (Letter will be the following letter in the sequence) in Column A, with the respective description in column B.

3. Enter the answers for each SLO analysis for only the questions that relate to that SLO (ex. If questions 1, 5, 7 relate to SLO-A, enter the correct answers for those questions).

4. Click on the button in row 1 to complete the student learning outcomes analysis for each SLO and student.