Test Cases for Attendance Aggregator Project

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1.) To handle students with entry in one subject's attendance and not present in the other.

Solution : Merge the attendance sheets on the basis of Name and Enrollment no. and fill N/A in the columns of subjects where the entry of student is not present.

2.) To make the students sorted on Enrollment no.

Solution : After merging the attendance sheets of different subjects, we sorted the result on the basis of Enrollment no. of students in the increasing order.

3.) To handle Names/Enrollment No. written in different formats(Upper Case/Lower Case/Proper Case).

Solution : We first converted all the Names and Enrollment no.s into lowercase format, hence Names and Enrollments written in any format will become equivalent and will not be treated as distinct entities.

4.) To handle the cases where the Serial no. column is present/absent.

Solution : We checked for the values in first column of input attendance sheets, if they are integers(which represent serial no.), we ignore that column.

5.) To handle the case where the name of Student having same Enrollment no. differ in the attendance sheets provided (i.e. either only First Name written in some files or even wrong/mistyped names).

Solution : After the merging of attendance sheets is done, we check for any duplicate Enrollment No.s present in the aggregated attendance sheet. If such an Enrollment no. is present, then we give user with the option to select One of the Names(or even provide a different Name) through the GUI of application and based on the feedback, we merge all the entries having corresponding Enrollment No. and keep the name provided by the user.

6.) To make the Aggregated Attendance in an editable(Excel) format.

Solution : We gave the user with a dropdown menu to select the output file format (PDF/Excel) and based on the option chosen, we convert the combined dataframe into the suitable format.

7.) To add columns for Attendance percentage in each subject and also the columns of Total Classes held, Total Classes Attended and Total Attendance Percentage.

Solution : For the attendance percentage column of individual subjects, we simply calculated (Classes Attended*100/Classes held) and this will give us the percentage attendance of each subject. Now, for the combined data, we added all the Classes Held column of every subject to know Total Classes held, similarly we got Total Classes Attended by adding the Classes Attended column of every subject. Then we applied the same formula as above to calculate the Total Attendance Percentage.

8.) To handle the problem of output PDF being cut if large no. of subjects are there.

Solution : To handle this problem, we made the width of columns in output pdf to be dynamic and we calculated the width of each column by dividing the page width with the no. of columns needed in the output pdf.