GE-103
MESS MANAGEMENT

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I. INTRODUCTION

In this project, we have implemented a program that manages the whole system of Mess. The whole code is based on Database Management System. We implemented a library called Pandas which converts the whole data input into an excel sheet. Using this code we can find the bill on a daily basis of a student on the basis of meals taken by him/her per day. Also, we can find the profit made by the mess per day and find out which time of meal should be changed or must get better for the betterment of Mess management. Our project code is broadly classified into four parts.

- In the first part, we took the details of all the students such as entry number, department, contact number, etc., and put the whole data into a excel file (.csv format).
- In the second part, we calculated the bill that a particular student has to pay on the basis of the type of meal taken by him/her.
- In the third part, we analyzed which time of meal should get better by comparing the bill of all the students for a particular day.
- In the fourth part, we took the suggestions and feedback from the student.
- In last part we added a new registration in the database of student information.

II. LITERATURE REVIEW

Anna Faiella, Scira Menoni, Maria Pia Boni, Maria Panoutsopoulou, Thekla Thoma, Sandro Salari, and Nicolas Rueda had published an article on “Enabling knowledge through Structured Disaster Damage and Loss Data Management System”. Their work involved the use of applications of Database management to draw the lessons learned using available data in case studies. With the help of the knowledge of database management, they drew the data which helps to find the damage caused to the building in Italy and Greece due to extreme climatic conditions. The database helped them to give a generalized view of the impact of the disaster on the whole area in a very systematic manner which helped them to think of a better solution to overcome the impact.

Wes Mckinney published the article “pandas: a Foundational Python Library for Data Analysis and Statistics” which gives a broad view and application of structured data sets, data alignment, handling missing data, hierarchical indexing, grouping, and aggregating data, combining or joining data sets and performance and use for large data sets.

III. OBJECTIVE

In this project, we imported the pandas library to manipulate and analyze the data easily and then we implemented .csv (Comma Separated Values) file to store the data such as a database and spreadsheet. We can easily store the data of students such as their details and their day-to-day bills of the mess on the basis of their interest. Moreover, the library used makes it easy to compare the data and provides us with a detailed analysis of data by comparing the data. We can easily check which meal should get better to improve the system. If a new student arrives at the campus, his information can easily be registered in the data. Students can also give suggestions and feedback on which mess can work for the betterment of the system.

IV. CONCLUSION

Overall we tried to compute the code which helps the mess management to check the record on daily basis and keep a track of it. The project also provides the flexibility to help the mess management in improving its food quality so that number of customers increases by determining the meal that should be changed or improved.

A. *Boundary Conditions:*

- The user had to input his entry number in small letters because the database stores all the entry numbers in small letters.
- When the choice of meal is made, the user had to input his choice in capital letters.

B. *Test Cases:*

1. *Test case 1:* Description: the first test case calls the function student_details() that takes the entry number as an input and outputs all the details of the student with that particular entry number.

Input: as per the instructions given by the user.
Output:

Entry_no.	Name	Year	Contact no.	Hostel name	Department
2021eeb1220	Virat	1	8171828283	chenab west	Electrical

2. *Test Case 2:* Description: this test case displays the price of various meals available at the mess.

Input: as per the instructions given by the user.
Output:

	Meal	price
1	Breakfast	30
2	Lunch	50
3	Snacks	20
4	Dinner	60
5	Special Dinner	80
6	Full Day	150

3. *Test Case 3:* Description: this test case will display the combined student information with their bill amount and the money earned by the mess in that particular day.

Input: bill computed for the four students as per their choices made for a particular day where Virat chooses full day, Vaibhav chooses breakfast and lunch, srihith chooses a full day and Somya chooses snacks and special dinner.
Output:

Entry_no.	Name	bill amount
2021eeb1220	Virat	150
2021eeb1219	Vaibhav	80
2021eeb1217	Srihit	150
2020ceb1215	Somya	100

Earning of mess: 480

4. *Test Case 4:* Description: This test case computes the total earning of the mess in a week and gives a deep analysis of which type of meal students are disliking on which day on the basis of the amount earned for that meal.

Input: Monday- 5 had breakfast, 4 had lunch, 3 had snacks, 2 had dinner
Tuesday- 9 had breakfast, 8 had lunch, 7 had snacks, 6 had dinner
Wednesday- 10 had breakfast, 11 had lunch, 12 had snacks, 13 had dinner
Thursday- 1 had breakfast, 2 had lunch, 3 had snacks, 4 had dinner
Friday- 5 had breakfast, 6 had lunch, 7 had snacks, 8 had dinner
Saturday- 11 had breakfast, 12 had lunch, 13 had snacks, 14 had dinner
Sunday- 20 had breakfast, 19 had lunch, 18 had snacks, 17 had dinner
Output:

Day	Breakfast	Lunch	Snacks	Dinner	Total Bill
Monday	150	200	60	120	530
Tuesday	270	400	140	360	1170
Wednesday	300	550	240	780	1870
Thursday	30	100	60	240	430
Friday	150	300	140	480	1070
Saturday	330	600	260	840	2030

Sunday 600 950 360 1020 2930
Students are not liking breakfast of : Thursday
Students are not liking lunch of : Thursday
Students are not liking snacks of : Monday
Students are not liking dinner of : Monday

5. *Test Case 5:* Description: this test case displays the thanks note after taking the suggestion or feedback from the student and stores it in a suggestion database corresponding to their entry numbers.

Input: as per the input made by the user.
Output: Thanks for your suggestion we will work on it

6. *Test Case 6:* This test case adds new registration of the student to the existing database.

Input: as per the entries made by the user
Output:
New registration added successfully

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REFERENCE

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