A SKILL ORIENTED COURSE -III REPORT

ON

INDUSTRIAL AUTOMATION

A skill oriented course -III Report is submitted

In accordance with requirement of degree of

BACHELOR OF TECHNOLOGY

IN

ELECTRICAL AND ELECTRONICS ENGINEERING

Submitted by

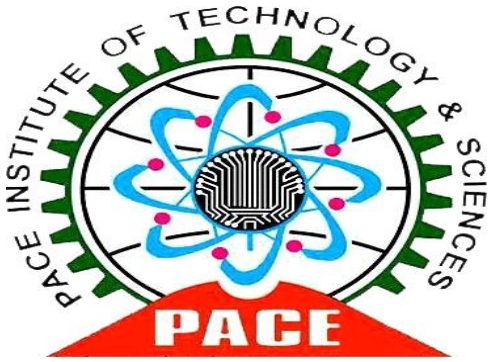
INDLA.AKSHAYA

21KQ1A0208

Under the Mentorship of

B.VENKATESH

Professer



DEPARTMENT OF ELECTRICAL AND EL ECTRONICS ENGINEERING

PACE INSTITUTE OF TECNOLOGY AND SCIENCES (AUTONOMOUS)

(Affiliated to Jawaharlal Nehru Technological University Kakinada, Kakinada &

Accredited by NAAC 'A' GRADE,An ISO 9001-2015 Certified Institution)

NH-16, Valluru Post , Prakasam District, A.P-523272.

(2023-2024)

STUDENT'S DECLARATION

I ,I.Akshaya a student of **Bachelor of Technology** Program, Reg. No. **21KQ1A0208** of the Department of **Electrical and Electronics Engineering, PACE Institute of Technology and Sciences, Ongole** do hereby declare that I have completed the Skill Oriented Course-III from **25/10/2023** to **31/10/2023** in **SV TECHNOLOGIES, NELLORE** under the Faculty Mentorship of **B.VENKATESH** Asst. Prof, Department of **Electrical and Electronics Engineering**.

(Signature of student & date)

OFFICIAL CERTIFICATION

This is to certify that **I.Akshaya** Reg. No. **21KQ1A0208** has completed his/her Skill Oriented Course in collaboration with **SV TECHNOLOGIES, NELLORE** on **INDUSTRIAL AUTOMATION** under my supervision as a part of partial fulfillment of the requirement for the Degree of **Bachelor of Technology** in the **Electrical and Electronics Engineering**

This report is accepted for evaluation.

Faculty Mentor **Head of the Department**

Mini Project:

SCHOLASTIC ACHIEVEMENTS DASHBOARD

date:10/6/2024

Submitted by: Indla. Akshaya(21kq1a0208)

Details of project: I analyze the scholastic achievements based on the student marks

Description:

The students are learned many subjects in school or college.It is refers to the level of success or an individual academic score. Academic achievements is any recognized successyou may have achieved in an educational society ,that you might be able to present on a resume or scholarship applications as evidence of your academic skills and unique academic strengths. So,the project will analyze the marks of each students and output various factors.

Requirments:

- Which students are maximum marks got.
- Which students are minimum marks got.
- Over all college first and last.
- Over all highest marks in subjects.
- How many members are fail in all subjects.
- Single person how many subjects are pass and fail.
- Convert marks to the grades.

- Over all college first and second students.
- Good marks eligible for univercities or less percentage for private colleges
- Eligible for scholorship or not.
- Sort the names in alphabetic order.

APPROACH:

1.Data Input and Storage:

- The code starts by defining an empty list s to store student data.
- It defines a function akki() to create a dictionary for each student's data and append it to the list s.
- It takes input for the number of students (n) and then iterates n times to take input for each student's name, roll number, and marks in different subjects. It then calls the akki() function to store this data.

2.DataFrame Creation:

- After collecting all the data, it creates a DataFrame df using the Pandas library and prints it to display the student data in tabular form.

3.Analyzing Total Marks:

- It calculates the maximum and minimum total marks from the DataFrame and then finds the students who achieved those marks.
- It prints the details of the student with the highest and lowest total marks.

4.Sorting Marks in Chosen Subject:

- It takes input from the user to select a subject index.
- It then sorts the student data based on the marks obtained in the chosen subject and prints the sorted marks.

5.Subject-wise Highest Marks:

- It iterates over the subjects and finds the highest marks obtained in each subject across all students.
- It prints the highest marks obtained in each subject.

6.Search by Name:

- It prompts the user to enter a name to search for.
- It iterates through the student data to find the details of the student with the entered name and prints those details.

7.Sorting Students by Total Marks:

- It sorts the student data based on the total marks obtained by each student and prints the names and total marks of students in sorted order.

Source Code:

```
import pandas as pd

s=[]

l=[]

def akki(name,rollno,marks):

   stu={

     'name':name,

     'rollno':rollno,

     'marks':marks,

     'total':total

     }

   s.append(stu)

n=int(input())
```

```
for i in range(n):
    name=input()
    rollno=input()
    marks=list(map(int,input().split()))
    total=sum(marks)
    akki(name,rollno,marks)
#print('name\t\trollno\t\tmarks\t\ttotal')
#for i in range(n):

#print(s[i]['name']+'\t\t'+str(s[i]['rollno'])+'\t\t'+str(s[i]['marks'])+'\t'+str(s[i]['total']))
df=pd.DataFrame(s)
print(df)
m=df['total'].max()
mn=df['total'].min()
print('no of students:',len(s))
high_mar=max(s,key=lambda x:x['total'])
print(f'first:{m}','name:',high_mar['name'],'rollno:',high_mar['rollno'],'marks:',high_mar['marks'])
low_mar=min(s,key=lambda x:x['total'])
print(f'last:{mn}','name:',low_mar['name'],'rollno:',low_mar['rollno'],'marks:',low_mar['marks'])
for i in range(n):
```

```
    l.append(s[i]['marks'][0])
    l.sort()
print('sorted in choosed subj:',l)
sub_high={}
for ak in s:
    for aki,akm in enumerate(ak['marks']):
        if aki not in sub_high or akm >sub_high[aki]:
            sub_high[aki]=akm
print('subject wise high marks:')
for aki,big_marks in sub_high.items():
    print('ak',aki+1,':',big_marks)
clg=input()
for i in range(n):
    if(s[i]['name'])==clg:
        print(s[i]['name'],s[i]['rollno'],s[i]['marks'],s[i]['total'])
sort_total_marks=sorted(s,key=lambda x:x['total'])
print('sort_total_marks:')
for s in sort_total_marks:
        print(s['total'])
```

Output file:

```
20
name:veve
```

rollno:201

marks:84 36 62 71

name:nayhi

rollno:202

marks:83 52 61 39

name:nanshi

rollno:203

marks:64 73 28 49

name:abhi

rollno:204

marks:37 84 52 61

name:akash

rollno:205

marks:38 74 56 65

name:bala

rollno:206

marks:84 65 36 72

name:gumiho

rollno:207

marks:38 57 68 47

name:akki

rollno:208

marks:76 85 94 84

name:anitha

rollno:209

marks:95 97 84 79

name:dhana

rollno:210

marks:74 36 58 29

name:anu

rollno:211

marks:74 36 28 48

name:venki

rollno:212

marks:94 63 54 52

name:ravi

rollno:213

marks:84 36 45 63

name:raju

rollno:214

marks:64 73 92 45

name:indhu

rollno:215

marks:46 74 49 81

name:madhu

rollno:216

marks:73 56 45 35

name:samee

rollno:217

marks:46 75 27 61

name:keeru

rollno:218

marks:36 74 63 27

name:nag

rollno:219

marks:73 25 64 51

name:sravani

rollno:220

marks:73 63 28 41

	name	rollno	marks	total
0	veve	201	[84, 36, 62, 71]	253
1	nayhi	202	[83, 52, 61, 39]	235
2	nanshi	203	[64, 73, 28, 49]	214
3	abhi	204	[37, 84, 52, 61]	234
4	akash	205	[38, 74, 56, 65]	233
5	bala	206	[84, 65, 36, 72]	257

6 gumiho 207 [38, 57, 68, 47] 210

7 akki 208 [76, 85, 94, 84] 339

8 anitha 209 [95, 97, 84, 79] 355

9 dhana 210 [74, 36, 58, 29] 197

10 anu 211 [74, 36, 28, 48] 186

11 venki 212 [94, 63, 54, 52] 263

12 ravi 213 [84, 36, 45, 63] 228

13 raju 214 [64, 73, 92, 45] 274

14 indhu 215 [46, 74, 49, 81] 250

15 madhu 216 [73, 56, 45, 35] 209

16 samee 217 [46, 75, 27, 61] 209

17 keeru 218 [36, 74, 63, 27] 200

18 nag 219 [73, 25, 64, 51] 213

19 sravani 220 [73, 63, 28, 41] 205

no of students: 20

first:355 name: anitha rollno: 209 marks: [95, 97, 84, 79]

last:186 name: anu rollno: 211 marks: [74, 36, 28, 48]

sorted in choosed subj: [36, 37, 38, 38, 46, 46, 64, 64, 73, 73, 73, 74, 74, 76, 83, 84, 84, 84, 94, 95]

subject wise high marks:

ak 1 : 95

ak 2 : 97

ak 3 : 94

ak 4 : 84

akki

akki 208 [76, 85, 94, 84] 339

sort_total_marks:

186

197

200

205

209

209

210

213

214

228

233

234

235

250

253

257

263

274

339

355

conclusion:

In conclusion, the provided code efficiently manages student data, utilizing Pandas DataFrame for analysis. It identifies students with highest and lowest marks, sorts students based on total marks, and offers functionalities like sorting marks by subject and subject-wise highest marks. While it successfully achieves its objectives, there's potential for improvement in error handling and user interaction to enhance robustness and user-friendliness.

THANK YOU