

RCF ACADEMIC PERFORMANCE ANALYSIS

GOAL OF THE ANALYSIS

- TOP 10 STUDENT WITH HIGH PERFORMANCES (IDENTIFIED BY DEPARTMENT)
- TOP 10 STUDENT WITH LOW PERFORMANCES (IDENTIFIED BY DEPARTMENT)
- IDENTIFYING MOST POPULAR ISSUES FACED BY THE STUDENTS
- DEPARTMENT WITH THE TOP PERFORMANCE
- DEPARTMENT WITH THEIR AVERAGE CGPA
- DEPARTMENT WITH THE LEAST PERFORMANCE
- DEPARTMENT BY THEIR NUMBER OF RESPONSE
- AVERAGE CGPA OF ALL STUDENTS

Type *Markdown* and LaTeX:  $\alpha^2$

In [48]:

```
#importing the data set
import pandas as pd
```

In [49]:

```
df = pd.read_excel(r"C:\Users\Sammy Reels\Desktop\file.xlsx")
df
```

	TIMESTAMP	EMAIL ADDRESS	NAME (SURNAME FIRST)	DEPARTMENT IN SCHOOL	LEVEL	DEPARTMENT(S) IN CHURCH	CURRENT CGPA	WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMIC
0	2025-04-25 18:03:55.937	olamideabisola840@gmail.com	Abayomi Abisola Olamide	Radiography	300	MEDIA	3.21	God is good
1	2025-04-25 18:41:12.558	abiodefrances002@gmail.com	ABIODE FRANCESS OSHIOKUWE	ANATOMY	400	TECHNICAL, WELFARE	4.63	Ability to read and not fall asleep \n
2	2025-04-25 17:56:10.169	togbvubemsa@gmail.com	Abizu Eseosa	Medicine	400	BIBLE STUDY, WELFARE	5.00	Balance
3	2025-04-27 11:44:18.304	abumerepeter2@gmail.com	Abumere	public administration	300	TECHNICAL	3.40	non
4	2025-04-28 07:00:46.963	vidaraymond84@gmail.com	Abusomwan osagioduwa Vida	Chemistry	200	MEDIA, IT	0.00	None
...	...	...	...	...	...	...	...	...
120	2025-04-25 15:57:59.307	oghenegegohfavour@gmail.com	Tode Oghenegegoh Favour	Agricultural Education	400	MUSIC, PRAYER	3.80	Presently, balancing othe courses with n pro...
121	2025-04-27 16:11:29.167	udofiapatience791@gmail.com	Udofia Patience	Philosophy	200	AESTHETICS	2.10	Finding it has assimilate eas and unders...
122	2025-04-25 19:07:15.175	osaserehunmwangho@gmail.com	Uhunmwangho Osasere Victory	Medicine	300	MEDIA, TRF	4.26	Forgetting wha read. Bulky academic coursew...
123	2025-04-26 08:02:02.619	ukaoluchi091@gmail.com	UKA OLUCHI	ECONOMICS	400	BIBLE STUDY, TRF	3.16	The above CGPA is for m 200 level, Whe my 30...
124	2025-04-25 16:16:07.142	usunobuwhinny55@gmail.com	Usunobu Winner	Computer Science	400	MEDIA, PRAYER	4.00	Well I'm in my finals, I need financial suppor...

125 rows × 9 columns

Type *Markdown* and LaTeX:  $\alpha^2$

PERFORMING STRUCTURAL ANALYSIS

```
In [50]: df.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 125 entries, 0 to 124
Data columns (total 9 columns):
 #   Column                                Non-Null Count  Dtype
---  -
 0   TIMESTAMP                            125 non-null    datetime64[ns]
 1   EMAIL ADDRESS                        125 non-null    object
 2   NAME (SURNAME FIRST)                 125 non-null    object
 3   DEPARTMENT IN SCHOOL                 125 non-null    object
 4   LEVEL                                125 non-null    int64
 5   DEPARTMENT(S) IN CHURCH              125 non-null    object
 6   CURRENT CGPA                         125 non-null    float64
 7   WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMICS?  114 non-null    object
 8   SUMMARY ISSUES                       125 non-null    object
dtypes: datetime64[ns](1), float64(1), int64(1), object(6)
memory usage: 8.9+ KB
```

```
In [51]: df.columns

Index(['TIMESTAMP', 'EMAIL ADDRESS', 'NAME (SURNAME FIRST)',
      'DEPARTMENT IN SCHOOL', 'LEVEL', 'DEPARTMENT(S) IN CHURCH',
      'CURRENT CGPA',
      'WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMICS?',
      'SUMMARY ISSUES'],
      dtype='object')
```

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PERFORMING DESCRIPTIVE STATISTICAL ANALYSIS

```
In [52]: df.describe()

      TIMESTAMP      LEVEL  CURRENT CGPA
count  125          125.000000  125.000000
mean    2025-04-26 08:33:07.407936256  294.400000  3.160616
min     2025-04-25 15:37:10.916000    100.000000  0.000000
25%     2025-04-25 17:38:33.540999936  200.000000  3.000000
50%     2025-04-25 22:25:09.487000064  300.000000  3.620000
75%     2025-04-26 17:03:15.992999936  400.000000  4.110000
max     2025-04-29 02:46:56.152000    600.000000  5.000000
std      NaN                102.629933  1.503337
```

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CHECKING FOR MISSING VALUES AND DUPLICATE

```
In [53]: df.isnull().sum()  #Checking for missing values

TIMESTAMP          0
EMAIL ADDRESS       0
NAME (SURNAME FIRST)  0
DEPARTMENT IN SCHOOL  0
LEVEL               0
DEPARTMENT(S) IN CHURCH  0
CURRENT CGPA        0
WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMICS?  11
SUMMARY ISSUES      0
dtype: int64
```

**INSIGHT**  
From the information above, the "WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMICS?" field is observed to have "11" missing values but those missing values has been corrected on Excel software with the "SUMMARY ISSUES" field.

Type *Markdown* and LaTeX:  $\alpha^2$

```
In [54]: df.duplicated().sum()  #Checking for duplicates

0
```

**INSIGHT**  
From the above information, no duplicate record is observed.

Type *Markdown* and LaTeX:  $\alpha^2$

DIVING INTO THE ANALYSIS

- TOP 10 STUDENT WITH HIGH PERFORMANCES (IDENTIFIED BY DEPARTMENT)
- TOP 10 STUDENT WITH LOW PERFORMANCES (IDENTIFIED BY DEPARTMENT)
- IDENTIFYING MOST POPULAR ISSUES FACED BY THE STUDENTS
- DEPARTMENT WITH THE TOP PERFORMANCE
- DEPARTMENT WITH THEIR AVERAGE CGPA
- DEPARTMENT WITH THE LEAST PERFORMANCE
- AVERAGE CGPA OF ALL STUDENTS

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TOP 10 STUDENT WITH HIGH PERFORMANCES (IDENTIFIED BY DEPARTMENT)

In [55]:

df

	TIMESTAMP	EMAIL ADDRESS	NAME (SURNAME FIRST)	DEPARTMENT IN SCHOOL	LEVEL	DEPARTMENT(S) IN CHURCH	CURRENT CGPA	WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMIC?
0	2025-04-25 18:03:55.937	olamideabisola840@gmail.com	Abayomi Abisola Olamide	Radiography	300	MEDIA	3.21	God is good
1	2025-04-25 18:41:12.558	abiodefrances002@gmail.com	ABIODE FRANCES OSHIOKUWE	ANATOMY	400	TECHNICAL, WELFARE	4.63	Ability to read and not fall asleep \n
2	2025-04-25 17:56:10.169	togbvubemsa@gmail.com	Abizu Eseosa	Medicine	400	BIBLE STUDY, WELFARE	5.00	Balance
3	2025-04-27 11:44:18.304	abumerepeter2@gmail.com	Abumere	public administration	300	TECHNICAL	3.40	non
4	2025-04-28 07:00:46.963	vidaraymond84@gmail.com	Abusomwan osagioduwa Vida	Chemistry	200	MEDIA, IT	0.00	None
...	...	...	...	...	...	...	...	...
120	2025-04-25 15:57:59.307	oghenegegohfavour@gmail.com	Tode Oghenegegoh Favour	Agricultural Education	400	MUSIC, PRAYER	3.80	Presently, balancing other courses with n pro...
121	2025-04-27 16:11:29.167	udofiapatience791@gmail.com	Udofia Patience	Philosophy	200	AESTHETICS	2.10	Finding it has t assimilate eas and unders...
122	2025-04-25 19:07:15.175	osasereuhunmwangho@gmail.com	Uhunmwangho Osasere Victory	Medicine	300	MEDIA, TRF	4.26	Forgetting wha read, Bulky academic coursew...
123	2025-04-26 08:02:02.619	ukaoluchi091@gmail.com	UKA OLUCHI	ECONOMICS	400	BIBLE STUDY, TRF	3.16	The above CGPA is for m 200 level, Whe my 30...
124	2025-04-25 16:16:07.142	usunobuwhinny55@gmail.com	Usunobu Winner	Computer Science	400	MEDIA, PRAYER	4.00	Well I'm in my finals, I need financial suppor...

125 rows × 9 columns

In [56]:

```
top_10_high_performance = (df.sort_values(by = "CURRENT CGPA", ascending = False).head(10)).loc[:, ["NAME ('",
top_10_high_performance
#Identifying the top 10 student with their name, department in school and their cgpa and level
```

	NAME (SURNAME FIRST)	DEPARTMENT IN SCHOOL	CURRENT CGPA	LEVEL
2	Abizu Eseosa	Medicine	5.000	400
29	Ayoro Excel	Geomatics	5.000	100
33	BRAIMAH GIDEON ASEKHAME	Mechanical Engineering	4.880	300
94	Oke Ayomide Ibukun	International Studies and Diplomacy	4.830	300
58	Ikotokin-Ab Fortune Osazee	Chemical Engineering	4.750	400
68	JACOB DANIEL ENYOOJO	Petroleum Engineering	4.694	200
50	Fredrick Hannah Ese	Medicine	4.630	300
1	ABIODE FRANCES OSHIOKUWE	ANATOMY	4.630	400
99	OLUSAYO AYOMIKUN MESHACK	MEDICINE	4.530	200
15	Ajayi Esosa Peace	Finance	4.500	100

INSIGHT

From the above analysis, it is observed that a "100 LEVEL" student is having a cgpa which is not supposed to be so until "200 LEVEL". Hence any "100 LEVEL" with a cgpa greater than 0 would be dropped.

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DROPPING RECORDS OF STUDENT IN 100 LEVEL WITH A CGPA GRATER THAN 0

In [57]:

df

	TIMESTAMP	EMAIL ADDRESS	NAME (SURNAME FIRST)	DEPARTMENT IN SCHOOL	LEVEL	DEPARTMENT(S) IN CHURCH	CURRENT CGPA	WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMIC?
0	2025-04-25 18:03:55.937	olamideabisola840@gmail.com	Abayomi Abisola Olamide	Radiography	300	MEDIA	3.21	God is good
1	2025-04-25 18:41:12.558	abiodefrances002@gmail.com	ABIODE FRANCES OSHIOKUWE	ANATOMY	400	TECHNICAL, WELFARE	4.63	Ability to read and not fall asleep \n
2	2025-04-25 17:56:10.169	togbvubemsa@gmail.com	Abizu Eseosa	Medicine	400	BIBLE STUDY, WELFARE	5.00	Balance
3	2025-04-27 11:44:18.304	abumerepeter2@gmail.com	Abumere	public administration	300	TECHNICAL	3.40	non
4	2025-04-28 07:00:46.963	vidaraymond84@gmail.com	Abusomwan osagioduwa Vida	Chemistry	200	MEDIA, IT	0.00	None
...	...	...	...	...	...	...	...	...
120	2025-04-25 15:57:59.307	oghenefegohfavour@gmail.com	Tode Oghenefegoh Favour	Agricultural Education	400	MUSIC, PRAYER	3.80	Presently, balancing othe courses with n pro...
121	2025-04-27 16:11:29.167	udofiapatience791@gmail.com	Udofia Patience	Philosophy	200	AESTHETICS	2.10	Finding it has 1 assimilate eas and unders...
122	2025-04-25 19:07:15.175	osasereuhunmwangho@gmail.com	Uhunmwangho Osasere Victory	Medicine	300	MEDIA, TRF	4.26	Forgetting wha read. Bulky academic coursew...
123	2025-04-26 08:02:02.619	ukaoluchi091@gmail.com	UKA OLUCHI	ECONOMICS	400	BIBLE STUDY, TRF	3.16	The above CGPA is for m 200 level, Whe my 30...
124	2025-04-25 16:16:07.142	usunobuwhinny55@gmail.com	Usunobu Winner	Computer Science	400	MEDIA, PRAYER	4.00	Well I'm in my finals, I need financial suppor...

125 rows x 9 columns

In [58]:

```
df.drop(df[(df["LEVEL"] == 100) & (df["CURRENT CGPA"] > 0)].index, inplace = True)
df
#dropping the records of 100 level student with a cgpa greater than 0
```

	TIMESTAMP	EMAIL ADDRESS	NAME (SURNAME FIRST)	DEPARTMENT IN SCHOOL	LEVEL	DEPARTMENT(S) IN CHURCH	CURRENT CGPA	WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMIC?
0	2025-04-25 18:03:55.937	olamideabisola840@gmail.com	Abayomi Abisola Olamide	Radiography	300	MEDIA	3.21	God is good
1	2025-04-25 18:41:12.558	abiodefrances002@gmail.com	ABIODE FRANCES OSHIOKUWE	ANATOMY	400	TECHNICAL, WELFARE	4.63	Ability to read and not fall asleep \n
2	2025-04-25 17:56:10.169	togbvubemsa@gmail.com	Abizu Eseosa	Medicine	400	BIBLE STUDY, WELFARE	5.00	Balance
3	2025-04-27 11:44:18.304	abumerepeter2@gmail.com	Abumere	public administration	300	TECHNICAL	3.40	non
4	2025-04-28 07:00:46.963	vidaraymond84@gmail.com	Abusomwan osagioduwa Vida	Chemistry	200	MEDIA, IT	0.00	None
...	...	...	...	...	...	...	...	...
120	2025-04-25 15:57:59.307	oghenefegohfavour@gmail.com	Tode Oghenefegoh Favour	Agricultural Education	400	MUSIC, PRAYER	3.80	Presently, balancing the courses with n pro...
121	2025-04-27 16:11:29.167	udofiapatience791@gmail.com	Udofia Patience	Philosophy	200	AESTHETICS	2.10	Finding it has t assimilate eas and unders...
122	2025-04-25 19:07:15.175	osaserehunmwangho@gmail.com	Uhunmwangho Osasere Victory	Medicine	300	MEDIA, TRF	4.26	Forgetting wha read. Bulky academic coursew...
123	2025-04-26 08:02:02.619	ukaoluchi091@gmail.com	UKA OLUCHI	ECONOMICS	400	BIBLE STUDY, TRF	3.16	The above CGPA is for m 200 level, Whe my 30...
124	2025-04-25 16:16:07.142	usunobuwhinny55@gmail.com	Usunobu Winner	Computer Science	400	MEDIA, PRAYER	4.00	Well I'm in my finals, I need financial suppor...

122 rows x 9 columns

Type *Markdown* and LaTeX:  $\alpha^2$

IDENTIFYING THE TOP 5 STUDENT WITH THE HIGHEST PERFORMANCE AGAIN AFTER ALTERING THE DATASET

In [59]:

```
top_10_high_performance = (df.sort_values(by = "CURRENT CGPA", ascending = False).head(10)).loc[:, ["NAME (SURNAME FIRST)", "DEPARTMENT IN SCHOOL", "CURRENT CGPA", "LEVEL"]]
top_10_high_performance
#Identifying the top 5 student with their name, department in school and their cgpa and level
```

	NAME (SURNAME FIRST)	DEPARTMENT IN SCHOOL	CURRENT CGPA	LEVEL
2	Abizu Eseosa	Medicine	5.000	400
33	BRAIMAH GIDEON ASEKHAME	Mechanical Engineering	4.880	300
94	Oke Ayomide Ibukun	International Studies and Diplomacy	4.830	300
58	Ikpotokin-Ab Fortune Osazee	Chemical Engineering	4.750	400
68	JACOB DANIEL ENYOOJO	Petroleum Engineering	4.694	200
50	Fredrick Hannah Ese	Medicine	4.630	300
1	ABIODE FRANCES OSHIOKUWE	ANATOMY	4.630	400
99	OLUSAYO AYOMIKUN MESHACK	MEDICINE	4.530	200
9	Adodo Austin	Medicine	4.490	300
10	Adodo Austin	Medicine	4.490	300

Type *Markdown* and LaTeX:  $\alpha^2$

TOP 10 STUDENT WITH LOW PERFORMANCES (IDENTIFIED BY DEPARTMENT)

```
In [60]: top_10_low_performance = (df.sort_values(by = "CURRENT CGPA", ascending = False).tail(10)).loc[:, ["NAME (SURNAME FIRST)", "DEPARTMENT IN SCHOOL", "CURRENT CGPA", "LEVEL"]]
top_10_low_performance
#Identifying the top 10 Lowest student with their name, department in school and their cgpa and level
```

	NAME (SURNAME FIRST)	DEPARTMENT IN SCHOOL	CURRENT CGPA	LEVEL
25	Asena Favour	Microbiology	0.0	200
110	Ovuede Oghenemaro Blessed	Health Safety and Environmental Education	0.0	200
88	Nze Chinedu	Statistics	0.0	100
89	Nze Chinedu	Statistics	0.0	100
106	Osayamen Itohan precious	PHILOSOPHY	0.0	100
18	Akinola Toluwani Daniel	Optometry	0.0	100
63	ISENMILA JESUITIE	MEDICINE	0.0	400
57	Ikechi Love	Accounting	0.0	400
36	CHUKWUKA CHIDINMA CHRISTABEL	LAW	0.0	300
38	Eboreime Aimalohi	Statistics	0.0	200

Type *Markdown* and LaTeX:  $\alpha^2$

IDENTIFYING MOST POPULAR ISSUES FACED BY THE STUDENTS

```
In [61]: df
```

	TIMESTAMP	EMAIL ADDRESS	NAME (SURNAME FIRST)	DEPARTMENT IN SCHOOL	LEVEL	DEPARTMENT(S) IN CHURCH	CURRENT CGPA	WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMICS?
0	2025-04-25 18:03:55.937	olamideabisola840@gmail.com	Abayomi Abisola Olamide	Radiography	300	MEDIA	3.21	God is good
1	2025-04-25 18:41:12.558	abiodefrances002@gmail.com	ABIODE FRANCES OSHIOKUWE	ANATOMY	400	TECHNICAL, WELFARE	4.63	Ability to read and not fall asleep \n
2	2025-04-25 17:56:10.169	togbvubemsa@gmail.com	Abizu Eseosa	Medicine	400	BIBLE STUDY, WELFARE	5.00	Balance
3	2025-04-27 11:44:18.304	abumerepeter2@gmail.com	Abumere	public administration	300	TECHNICAL	3.40	non
4	2025-04-28 07:00:46.963	vidaraymond84@gmail.com	Abusomwan osagioduwa Vida	Chemistry	200	MEDIA, IT	0.00	None
...	...	...	...	...	...	...	...	...
120	2025-04-25 15:57:59.307	oghenefegohfavour@gmail.com	Tode Oghenefegoh Favour	Agricultural Education	400	MUSIC, PRAYER	3.80	Presently, balancing othe courses with n pro...
121	2025-04-27 16:11:29.167	udofiapatience791@gmail.com	Udofia Patience	Philosophy	200	AESTHETICS	2.10	Finding it has 1 assimilate eas and unders...
122	2025-04-25 19:07:15.175	osaserehunmwangho@gmail.com	Uhunmwangho Osasere Victory	Medicine	300	MEDIA, TRF	4.26	Forgetting wha read. Bulky academic coursew...
123	2025-04-26 08:02:02.619	ukaoluchi091@gmail.com	UKA OLUCHI	ECONOMICS	400	BIBLE STUDY, TRF	3.16	The above CGPA is for m 200 level, Whe my 30...
124	2025-04-25 16:16:07.142	usunobuwhinny55@gmail.com	Usunobu Winner	Computer Science	400	MEDIA, PRAYER	4.00	Well I'm in my finals, I need financial suppor...

122 rows x 9 columns

```
In [62]: df.columns

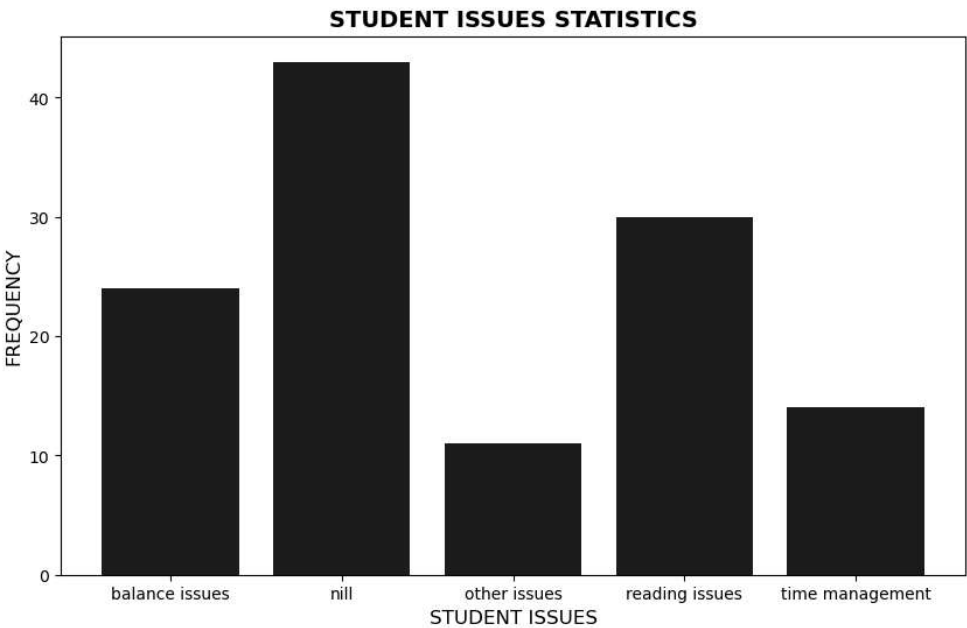
Index(['TIMESTAMP', 'EMAIL ADDRESS', 'NAME (SURNAME FIRST)',
      'DEPARTMENT IN SCHOOL', 'LEVEL', 'DEPARTMENT(S) IN CHURCH',
      'CURRENT CGPA',
      'WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMICS?',
      'SUMMARY ISSUES'],
      dtype='object')
```

```
In [63]: popular_issues = df.groupby("SUMMARY ISSUES")["SUMMARY ISSUES"].count()
popular_issues

SUMMARY ISSUES
balance issues    24
nill              43
other issues      11
reading issues    30
time management   14
Name: SUMMARY ISSUES, dtype: int64
```

```
In [64]: #Visualizing the statistics
import matplotlib.pyplot as plt
```

```
In [65]: plt.figure(figsize = (10, 6))
plt.bar(popular_issues.index,popular_issues.values, color = "blue")
plt.title("STUDENT ISSUES STATISTICS", fontweight = "bold", fontsize = 14)
plt.xlabel("STUDENT ISSUES", fontsize = 12)
plt.ylabel("FREQUENCY", fontsize = 12)
plt.show()
```



	<b>INSIGHT</b>  From the above analysis, it is observed that the most popular issues among the student is reading issues followed by balancing issues and then time management.  The "other issues" statistics describes issues that are genuinely due to school factors like issues from lecturers and so on.  It is also observed that majority of the student were not having any issue or challenge.
	Type <i>Markdown</i> and LaTeX: $\alpha^2$
	<b>DEPARTMENT WITH THE TOP PERFORMANCE</b>

In [66]:

df

	TIMESTAMP	EMAIL ADDRESS	NAME (SURNAME FIRST)	DEPARTMENT IN SCHOOL	LEVEL	DEPARTMENT(S) IN CHURCH	CURRENT CGPA	WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMIC?
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...	...	...	...	...	...	...	...	...
120	2025-04-25 15:57:59.307	oghenegegohfavour@gmail.com	Tode Oghenegegoh Favour	Agricultural Education	400	MUSIC, PRAYER	3.80	Presently, balancing othe courses with n pro...
121	2025-04-27 16:11:29.167	udofiapatience791@gmail.com	Udofia Patience	Philosophy	200	AESTHETICS	2.10	Finding it has 1 assimilate eas and unders...
122	2025-04-25 19:07:15.175	osaserehunmwangho@gmail.com	Uhunmwangho Osasere Victory	Medicine	300	MEDIA, TRF	4.26	Forgetting wha read. Bulky academic coursew...
123	2025-04-26 08:02:02.619	ukaoluchi091@gmail.com	UKA OLUCHI	ECONOMICS	400	BIBLE STUDY, TRF	3.16	The above CGPA is for m 200 level, Whe my 30...
124	2025-04-25 16:16:07.142	usunobuwhinny55@gmail.com	Usunobu Winner	Computer Science	400	MEDIA, PRAYER	4.00	Well I'm in my finals, I need financial suppor...

122 rows x 9 columns

In [67]:

```
#Grouping each department by their average cgpa
dept_by_cgpa = df.groupby("DEPARTMENT IN SCHOOL")["CURRENT CGPA"].mean().sort_values(ascending = False)
dept_by_cgpa
```

DEPARTMENT IN SCHOOL	
International Studies and Diplomacy	4.830
Chemical Engineering	4.750
Petroleum Engineering	4.694
ANATOMY	4.630
SOCIAL WORK	4.420
...	...
Chemistry	0.000
Microbiology	0.000
Economics and statistics	0.000
Physiotherapy	0.000
Forestry and wildlife	0.000

Name: CURRENT CGPA, Length: 79, dtype: float64

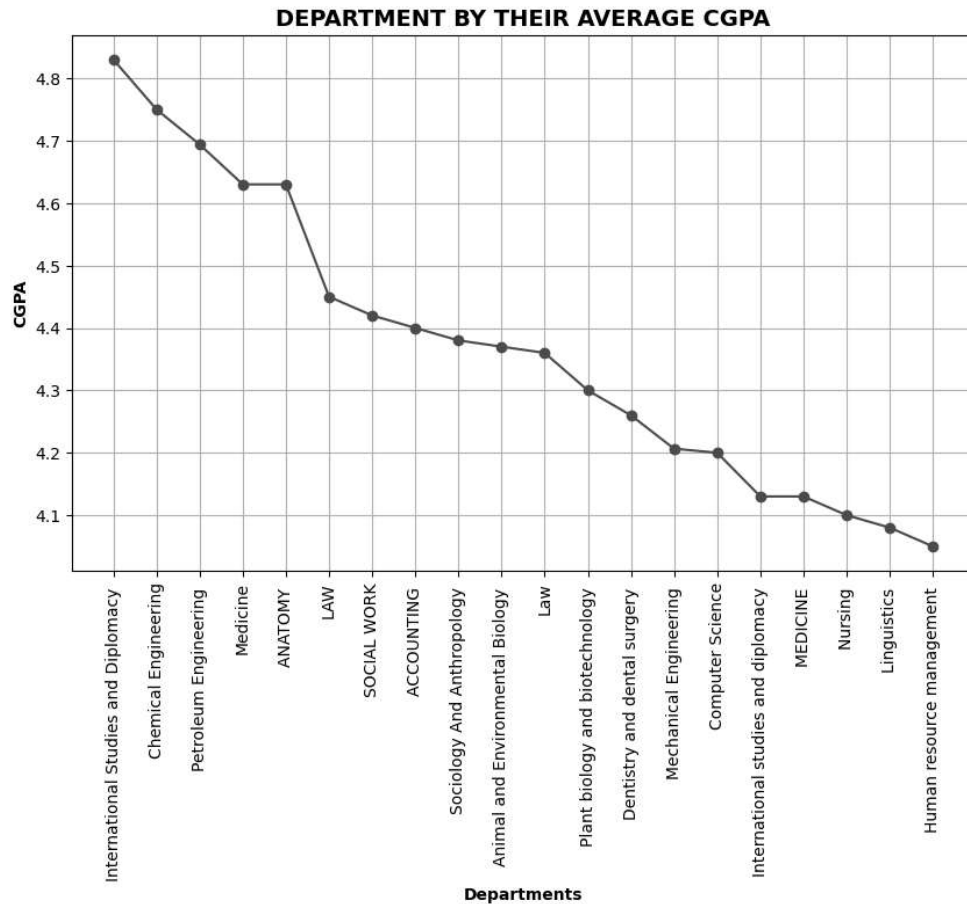
In [68]:

```
#Bringing out the top 10 department by performance
dept_by_cgpa_10 = pd.DataFrame(dept_by_cgpa.head(10))
dept_by_cgpa_10
```

	CURRENT CGPA
DEPARTMENT IN SCHOOL	
International Studies and Diplomacy	4.830
Chemical Engineering	4.750
Petroleum Engineering	4.694
ANATOMY	4.630
SOCIAL WORK	4.420
ACCOUNTING	4.400
Sociology And Anthropology	4.380
Animal and Environmental Biology	4.370
Law	4.360
Plant biology and biotechnology	4.300



```
In [69]: #Visualizing with a Line chart
plt.figure(figsize = (10, 6))
plt.plot(dept_by_cgpa_20, color = "red", marker = "o")
plt.xticks(rotation = 90)
plt.title("DEPARTMENT BY THEIR AVERAGE CGPA", fontweight = "bold", fontsize = 14)
plt.ylabel("CGPA", fontweight = "bold")
plt.xlabel("Departments", fontweight = "bold")
plt.grid()
plt.show()
```



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#### DEPARTMENT WITH THE LEAST PERFORMANCE

```
In [70]: #Bringing out the top Lowest 10 department by performance
dept_by_cgpa_low10 = pd.DataFrame(dept_by_cgpa.tail(10))
dept_by_cgpa_low10
```

DEPARTMENT IN SCHOOL	CURRENT CGPA
Plant biology and biotechnology (PBB)	1.820
Finance	1.795
Health Safety and Environmental Education	1.500
Statistics	0.000
PHILOSOPHY	0.000
Chemistry	0.000
Microbiology	0.000
Economics and statistics	0.000
Physiotherapy	0.000
Forestry and wildlife	0.000

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#### DEPARTMENT BY THEIR NUMBER OF RESPONSE

```
In [71]: df.columns

Index(['TIMESTAMP', 'EMAIL ADDRESS', 'NAME (SURNAME FIRST)',
      'DEPARTMENT IN SCHOOL', 'LEVEL', 'DEPARTMENT(S) IN CHURCH',
      'CURRENT CGPA',
      'WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMICS?',
      'SUMMARY ISSUES'],
      dtype='object')
```

```
In [72]: dept_response = df.groupby("DEPARTMENT IN SCHOOL")["DEPARTMENT IN SCHOOL"].count().sort_values(ascending = I
dept_response

DEPARTMENT IN SCHOOL
Medicine                6
Pharmacy                5
Biochemistry            4
Accounting              4
Computer Science        4
..
International Studies and Diplomacy  1
ANATOMY                 1
International studies and diplomacy  1
Law                     1
public administration    1
Name: DEPARTMENT IN SCHOOL, Length: 79, dtype: int64
```

```
In [74]: #top 40 department with the highest responce
pd.DataFrame(dept_response.head(40))
```

DEPARTMENT IN SCHOOL	
DEPARTMENT IN SCHOOL	
Medicine	6
Pharmacy	5
Biochemistry	4
Accounting	4
Computer Science	4
LAW	4
Nursing science	4
MEDICINE	3
Optometry	3
Statistics	3
Computer Engineering	2
Economics	2
Nursing Science	2
Health Safety and Environmental Education	2
Microbiology	2
Nursing	2
Physiotherapy	2
Finance	2
Forestry and wildlife	2
Plant Biology and Biotechnology	2
Medical biochemistry	2
Mechanical Engineering	2
Animal Science	2
Medical Laboratory Science	1
Medical Biochemistry	1
Mechatronics Engineering	1
NURSING SCIENCE	1
Mechanical	1
Mathematics	1
ACCOUNTING	1
PHILOSOPHY	1
PHARMACY	1
Petroleum Engineering	1
Petroleum engineering	1
Philosophy	1
Plant biology and biotechnology	1
Plant biology and biotechnology (PBB)	1
Radiography	1
SOCIAL WORK	1
SOIL SCIENCE AND LAND MANAGEMENT	1

	Type <i>Markdown</i> and LaTeX: $\alpha^2$
	<b>AVERAGE CGPA OF ALL STUDENTS</b>
In [75]:	<pre>df.columns  Index(['TIMESTAMP', 'EMAIL ADDRESS', 'NAME (SURNAME FIRST)',       'DEPARTMENT IN SCHOOL', 'LEVEL', 'DEPARTMENT(S) IN CHURCH',       'CURRENT CGPA',       'WHAT ARE THE ISSUES YOU ARE FACING AS REGARDING YOUR ACADEMICS?',       'SUMMARY ISSUES'],       dtype='object')</pre>
In [76]:	<pre>df["CURRENT CGPA"].mean()  3.1310409836065576</pre>
	<b>INSIGHT</b> From the information above, the overall average cgpa for all student is <b>3.131</b> which is below the standard RCF CGPA
	Type <i>Markdown</i> and LaTeX: $\alpha^2$
	<h2>Summary</h2> <p>This analysis of RCF academic performance was aimed at uncovering key insights into students' CGPA distribution, departmental performance, and common academic challenges. The dataset underwent structural and descriptive statistical analysis, including checks for missing values and duplicates. The issues column with 11 missing entries was corrected using Excel and included in the analysis.</p> <p>Key findings include:</p> <ul style="list-style-type: none"><li>• Identification of the top 10 high-performing and low-performing students across departments.</li><li>• Average CGPA computation for each department as well as the entire student body.</li><li>• Ranking of departments based on performance and number of respondents.</li><li>• Extraction of the most common academic issues faced by students.</li></ul> <h2>Conclusion</h2> <p>The academic performance analysis revealed crucial areas of strength and concern among RCF students. While some departments showed consistent excellence, others reflected the need for academic support. The widespread issues faced by students — such as course load, time management, and comprehension challenges — point toward actionable interventions like mentorship, academic counseling, and tailored tutorials.</p> <p>Overall, this analysis serves as a strategic tool to make data-driven decisions aimed at enhancing academic success across all departments.</p>