In [1]:
```python
import pandas as pd
```

In [2]:
```python
df = pd.read_excel("collegedata.xlsx")
df
```

Out[2]:

	Timestamp	student name : (please enter your name as per your university records)	enter your graduation stream (student has to choose his or her graduation stream)	enter your x th class % (student has to enter tenth percentage)	enter your xii % (student has to enter twelfth percentage)	enter your aggregate cgpa or %, in graduation upto 4th semester.	do you have active backlogs in your graduation?	Complete the series from the given options: 20, 90, 280, 650,__, 2170	Fill the given number series by using below alternatives: 7, 27, 10, __, 13, 21.	Find the next number by analyzing the series: 340, 300, 390, 350, 440, __.	Fill out the missed number in the series: 60, __, 390, 720, 1160, 1710.	Complete the given number series: 60, 140,__, 1050, 2300.
0	2022-02-26 11:01:21.466	19ucs206	bcom computers	76	76.0000	No	Yes	980	32	480	190	290
1	2022-02-26 11:04:39.439	K.S.Moogambigai	bcom computers	90	65.0000	83	No	980	32	400	190	290
2	2022-02-26 11:15:54.396	DEEPIKA S	bca	0.89	0.6366	0.8177	No	1260	32	400	190	290
3	2022-02-26 11:18:15.264	Sneka Ananthan	bcom computers	0.725	0.5250	0.7824	No	1260	32	400	170	290
4	2022-02-26 11:20:13.335	VEERAKUMARI.J	bca	74.2	70.5000	8.72	No	1260	24	480	190	410
...	...	...	...	...	...	...	...	...	...	...	...	...
166	2022-02-26 18:52:23.379	JAMUNA.R	bsc others	93.8	77.3000	81.5	No	980	24	400	170	360
167	2022-02-27 07:02:44.601	Hariharan.A	bca	43.6	59.8000	67.9	No	980	24	500	210	360
168	2022-02-27 13:25:22.124	BABURAJ.Y	bca	0.818	0.6083	0.781	No	1260	24	400	210	410
169	2022-02-28 10:21:46.657	C.RITHU	bca	0.83	0.6000	0.65	No	1260	9	400	170	360
170	2022-02-28 14:39:09.524	Manjunath v.ka	bsc computers	76	57.0000	63	No	860	32	480	170	360

171 rows × 12 columns

In [3]:
```python
df.head()
```

Out[3]:

	Timestamp	student name : (please enter your name as per your university records)	enter your graduation stream (student has to choose his or her graduation stream)	enter your x th class % (student has to enter tenth percentage)	enter your xii % (student has to enter twelfth percentage)	enter your aggregate cgpa or %, in graduation upto 4th semester.	do you have active backlogs in your graduation?	Complete the series from the given options: 20, 90, 280, 650,__, 2170	Fill the given number series by using below alternatives: 7, 27, 10, __, 13, 21.	Find the next number by analyzing the series: 340, 300, 390, 350, 440, __.	Fill out the missed number in the series: 60, __, 390, 720, 1160, 1710.	Complete the given number series: 60, 140,__, 1050, 2300.
0	2022-02-26 11:01:21.466	19ucs206	bcom computers	76	76.0000	No	Yes	980	32	480	190	290
1	2022-02-26 11:04:39.439	K.S.Moogambigai	bcom computers	90	65.0000	83	No	980	32	400	190	290
2	2022-02-26 11:15:54.396	DEEPIKA S	bca	0.89	0.6366	0.8177	No	1260	32	400	190	290
3	2022-02-26 11:18:15.264	Sneka Ananthan	bcom computers	0.725	0.5250	0.7824	No	1260	32	400	170	290
4	2022-02-26 11:20:13.335	VEERAKUMARI.J	bca	74.2	70.5000	8.72	No	1260	24	480	190	410

In [4]:
```python
df.tail()
```

Out[4]:

	Timestamp	student name : (please enter your name as per your university records)	enter your graduation stream (student has to choose his or her graduation stream)	enter your x th class % (student has to enter tenth percentage)	enter your xii % (student has to enter twelfth percentage)	enter your aggregate cgpa or %, in graduation upto 4th semester.	do you have active backlogs in your graduation?	Complete the series from the given options: 20, 90, 280, 650,__, 2170	Fill the given number series by using below alternatives: 7, 27, 10, __, 13, 21.	Find the next number by analyzing the series: 340, 300, 390, 350, 440, __.	Fill out the missed number in the series: 60, __, 390, 720, 1160, 1710.	Complete the given number series: 60, 140,__, 1050, 2300.
166	2022-02-26 18:52:23.379	JAMUNA.R	bsc others	93.8	77.3000	81.5	No	980	24	400	170	360
167	2022-02-27 07:02:44.601	Hariharan.A	bca	43.6	59.8000	67.9	No	980	24	500	210	360
168	2022-02-27 13:25:22.124	BABURAJ.Y	bca	0.818	0.6083	0.781	No	1260	24	400	210	410
169	2022-02-28 10:21:46.657	C.RITHU	bca	0.83	0.6000	0.65	No	1260	9	400	170	360
170	2022-02-28 14:39:09.524	Manjunath v.ka	bsc computers	76	57.0000	63	No	860	32	480	170	360

In [5]:
```python
len(df)
```

Out[5]:
```
171
```

In [6]:
```python
df.describe()
```

Out[6]:

	enter your xii % (student has to enter twelfth percentage)	Complete the series from the given options: 20, 90, 280, 650,__, 2170	Fill the given number series by using below alternatives: 7, 27, 10, __, 13, 21.	Find the next number by analyzing the series: 340, 300, 390, 350, 440, __.	Fill out the missed number in the series: 60, __, 390, 720, 1160, 1710.	Complete the given number series: 60, 140,__, 1050, 2300.
count	171.000000	171.000000	171.000000	171.000000	171.000000	171.000000
mean	36.827706	1192.222222	23.327485	429.181287	200.760234	402.923977
std	33.580409	235.768525	7.785228	48.874713	26.854857	83.776243
min	0.490000	860.000000	9.000000	400.000000	170.000000	290.000000
25%	0.680000	980.000000	24.000000	400.000000	170.000000	360.000000
50%	55.000000	1260.000000	24.000000	400.000000	190.000000	410.000000
75%	66.000000	1260.000000	32.000000	480.000000	210.000000	410.000000
max	87.000000	1750.000000	32.000000	550.000000	250.000000	540.000000

In [7]:
```python
# I don't want time stamp column
df = df.drop('Timestamp',axis=1)# It will return remaining columns
#df.drop('Timestamp',axis=1,inplace=True)
df
```

Out[7]:

	student name : (please enter your name as per your university records)	enter your graduation stream (student has to choose his or her graduation stream)	enter your x th class % (student has to enter tenth percentage)	enter your xii % (student has to enter twelfth percentage)	enter your aggregate cgpa or %, in graduation upto 4th semester.	do you have active backlogs in your graduation?	Complete the series from the given options: 20, 90, 280, 650,__, 2170	Fill the given number series by using below alternatives: 7, 27, 10, __, 13, 21.	Find the next number by analyzing the series: 340, 300, 390, 350, 440, __.	Fill out the missed number in the series: 60, __, 390, 720, 1160, 1710.	Complete the given number series: 60, 140,__, 1050, 2300.
0	19ucs206	bcom computers	76	76.0000	No	Yes	980	32	480	190	290
1	K.S.Moogambigai	bcom computers	90	65.0000	83	No	980	32	400	190	290
2	DEEPIKA S	bca	0.89	0.6366	0.8177	No	1260	32	400	190	290
3	Sneka Ananthan	bcom computers	0.725	0.5250	0.7824	No	1260	32	400	170	290
4	VEERAKUMARI.J	bca	74.2	70.5000	8.72	No	1260	24	480	190	410
...	...	...	...	...	...	...	...	...	...	...	...
166	JAMUNA.R	bsc others	93.8	77.3000	81.5	No	980	24	400	170	360
167	Hariharan.A	bca	43.6	59.8000	67.9	No	980	24	500	210	360
168	BABURAJ.Y	bca	0.818	0.6083	0.781	No	1260	24	400	210	410
169	C.RITHU	bca	0.83	0.6000	0.65	No	1260	9	400	170	360
170	Manjunath v.ka	bsc computers	76	57.0000	63	No	860	32	480	170	360

171 rows × 11 columns

In [8]:
```python
#remove who have backlogs
df = df[df['do you have active backlogs in your graduation?'] != 'Yes']
df
```

Out[8]:

	student name : (please enter your name as per your university records)	enter your graduation stream (student has to choose his or her graduation stream)	enter your x th class % (student has to enter tenth percentage)	enter your xii % (student has to enter twelfth percentage)	enter your aggregate cgpa or %, in graduation upto 4th semester.	do you have active backlogs in your graduation?	Complete the series from the given options: 20, 90, 280, 650,__, 2170	Fill the given number series by using below alternatives: 7, 27, 10, __, 13, 21.	Find the next number by analyzing the series: 340, 300, 390, 350, 440, __.	Fill out the missed number in the series: 60, __, 390, 720, 1160, 1710.	Complete the given number series: 60, 140,__, 1050, 2300.
1	K.S.Moogambigai	bcom computers	90	65.0000	83	No	980	32	400	190	290
2	DEEPIKA S	bca	0.89	0.6366	0.8177	No	1260	32	400	190	290
3	Sneka Ananthan	bcom computers	0.725	0.5250	0.7824	No	1260	32	400	170	290
4	VEERAKUMARI.J	bca	74.2	70.5000	8.72	No	1260	24	480	190	410
5	Balaji .R	bca	0.804	0.6467	0.76	No	980	24	400	170	540
...	...	...	...	...	...	...	...	...	...	...	...
166	JAMUNA.R	bsc others	93.8	77.3000	81.5	No	980	24	400	170	360
167	Hariharan.A	bca	43.6	59.8000	67.9	No	980	24	500	210	360
168	BABURAJ.Y	bca	0.818	0.6083	0.781	No	1260	24	400	210	410
169	C.RITHU	bca	0.83	0.6000	0.65	No	1260	9	400	170	360
170	Manjunath v.ka	bsc computers	76	57.0000	63	No	860	32	480	170	360

159 rows × 11 columns

In [9]:
```python
len(df)
```

Out[9]:
```
159
```

we will correct papers with Numpy

we will generally use numpy for calculations

In [10]:
```python
arr = df.to_numpy()#to convert data frame into numpy arrays
```

In [11]:
```python
item = arr[2]
print('length is..',len(item),'\n','\n')
for j in item:
    print(j)
```

```
length is.. 11


Sneka Ananthan
bcom computers
0.725
0.525
0.7824
No
1260
32
400
170
290
```

In [21]:
```python
item=arr[2]
print(len(arr[2]))
for i in item:
    print(i)
```

```
11
Sneka Ananthan
bcom computers
0.725
0.525
0.7824
No
1260
32
400
170
290
```

In [18]:
```python
ans = [1260,24,400,170,410]
```

In [25]:
```python
scores = []

for i in arr:
    count = 0
    if i[6] == ans[0]:
        count = count+1
    if i[7] == ans[1]:
        count = count+1
    if i[8] == ans[2]:
        count = count+1
    if i[9] == ans[3]:
        count = count+1
    if i[10] == ans[4]:
        count = count+1
    scores.append(count)

print(scores)
df['scores'] = scores
```

```
[1, 2, 3, 3, 3, 2, 1, 4, 1, 4, 0, 1, 2, 2, 2, 3, 3, 3, 2, 1, 1, 1, 2, 4, 4, 2, 2, 2, 3, 2, 2, 2, 1, 3, 1, 3, 2, 2, 2, 2, 3, 4, 1, 3, 2, 2, 1, 1, 3, 1, 3, 3, 3, 2, 4, 3, 0, 1, 2, 1, 3, 1, 3, 1, 4, 4, 5, 4, 4, 2, 3, 1, 1, 2, 2, 1,
2, 4, 2, 3, 1, 4, 2, 3, 1, 2, 1, 1, 3, 4, 0, 4, 3, 3, 3, 3, 2, 1, 1, 3, 2, 2, 1, 5, 0, 1, 1, 2, 3, 3, 1, 2, 0, 3, 2, 3, 2, 1, 2, 3, 2, 2, 3, 3, 2, 3, 5, 4, 2, 3, 3, 2, 1, 2, 1, 3, 2, 3, 4, 3, 2, 3, 1, 3, 1, 3, 4, 2, 2, 2, 1, 4,
5, 1, 3, 1, 4, 3, 1]
```

```
C:\Users\OM OM OM.LAPTOP-Q2URO85K\AppData\Local\Temp\ipykernel_12264\504239011.py:18: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
  df['scores'] = scores
```

In [22]:
```python
len(scores)
```

Out[22]:
```
159
```

In [26]:
```python
df.head()
```

Out[26]:

	student name : (please enter your name as per your university records)	enter your graduation stream (student has to choose his or her graduation stream)	enter your x th class % (student has to enter tenth percentage)	enter your xii % (student has to enter twelfth percentage)	enter your aggregate cgpa or %, in graduation upto 4th semester.	do you have active backlogs in your graduation?	Complete the series from the given options: 20, 90, 280, 650,__, 2170	Fill the given number series by using below alternatives: 7, 27, 10, __, 13, 21.	Find the next number by analyzing the series: 340, 300, 390, 350, 440, __.	Fill out the missed number in the series: 60, __, 390, 720, 1160, 1710.	Complete the given number series: 60, 140,__, 1050, 2300.	scores
1	K.S.Moogambigai	bcom computers	90	65.0000	83	No	980	32	400	190	290	1
2	DEEPIKA S	bca	0.89	0.6366	0.8177	No	1260	32	400	190	290	2
3	Sneka Ananthan	bcom computers	0.725	0.5250	0.7824	No	1260	32	400	170	290	3
4	VEERAKUMARI.J	bca	74.2	70.5000	8.72	No	1260	24	480	190	410	3
5	Balaji .R	bca	0.804	0.6467	0.76	No	980	24	400	170	540	3

In [27]:
```python
df.tail()
```

Out[27]:

	student name : (please enter your name as per your university records)	enter your graduation stream (student has to choose his or her graduation stream)	enter your x th class % (student has to enter tenth percentage)	enter your xii % (student has to enter twelfth percentage)	enter your aggregate cgpa or %, in graduation upto 4th semester.	do you have active backlogs in your graduation?	Complete the series from the given options: 20, 90, 280, 650,__, 2170	Fill the given number series by using below alternatives: 7, 27, 10, __, 13, 21.	Find the next number by analyzing the series: 340, 300, 390, 350, 440, __.	Fill out the missed number in the series: 60, __, 390, 720, 1160, 1710.	Complete the given number series: 60, 140,__, 1050, 2300.	scores
166	JAMUNA.R	bsc others	93.8	77.3000	81.5	No	980	24	400	170	360	3
167	Hariharan.A	bca	43.6	59.8000	67.9	No	980	24	500	210	360	1
168	BABURAJ.Y	bca	0.818	0.6083	0.781	No	1260	24	400	210	410	4
169	C.RITHU	bca	0.83	0.6000	0.65	No	1260	9	400	170	360	3
170	Manjunath v.ka	bsc computers	76	57.0000	63	No	860	32	480	170	360	1

In [28]:
```python
df = df.sort_values(by='scores')
df[:10]
```

Out[28]:

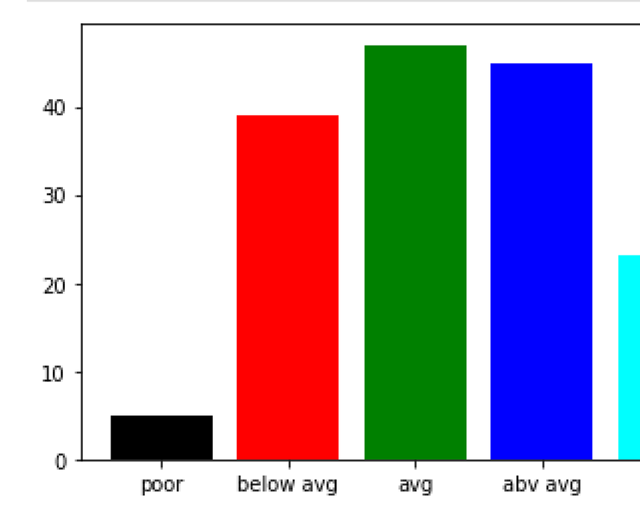
	student name : (please enter your name as per your university records)	enter your graduation stream (student has to choose his or her graduation stream)	enter your x th class % (student has to enter tenth percentage)	enter your xii % (student has to enter twelfth percentage)	enter your aggregate cgpa or %, in graduation upto 4th semester.	do you have active backlogs in your graduation?	Complete the series from the given options: 20, 90, 280, 650,__, 2170	Fill the given number series by using below alternatives: 7, 27, 10, __, 13, 21.	Find the next number by analyzing the series: 340, 300, 390, 350, 440, __.	Fill out the missed number in the series: 60, __, 390, 720, 1160, 1710.	Complete the given number series: 60, 140,__, 1050, 2300.	scores
122	V. Mothichandrika	bcom computers	70.6	60.80	70.8	No	1750	9	480	250	540	0
113	S.Madhumithra	bcom computers	60	0.69	79	No	980	32	550	190	360	0
11	MAHESH KRISHNA.S	bcom computers	71.4	60.00	78	No	980	32	550	190	290	0
99	MANOJ	bca	81.04	72.16	0.7808	No	1750	32	480	210	290	0
61	S.Aishwarya	bcom computers	0.95	0.76	0.86	No	860	9	500	190	360	0
62	Vidhya B	bca	87.8	80.10	8.6	No	980	9	400	210	290	1
64	64.5	bsc computers	60	64.00	64.25	No	980	9	400	210	290	1
66	AFRAA HASEEN T	bsc computers	95.8	87.00	8.6	No	1260	32	480	190	290	1
68	sriganth.A	bca	86	63.00	76	No	860	24	500	190	290	1
77	Mohankumar. R	bca	56	55.30	76	No	1260	32	550	190	290	1

In [33]:
```python
import matplotlib.pyplot as plt

poor_count = len(df[df['scores']==0])
bel_avg_count = len(df[df['scores']==1])
avg_count = len(df[df['scores']==2])
abv_avg_count = len(df[df['scores']==3])
good_count = len( df[ df['scores']==4]) + len( df[ df['scores']==5])

grades = ['poor','below avg','avg','abv avg','great']
count = [poor_count, bel_avg_count, avg_count, abv_avg_count, good_count]
colors = ['black','red','green','blue','cyan']

plt.bar(grades,count,color=colors)
plt.show()
```



In [ ]: