In [1]:
```
import pandas as pd
import matplotlib.pyplot as plt
import numpy as np
```

In [2]:
```
data = pd.read_excel('sahra.xlsx', index_col='index')
```

In [3]:
```
data
```

Out[3]:

index	name	Gender	islam	tamil	english	science	maths	history	civics	geog	tamlit/art/arab	pts	sinhala	helth	ict
2442	MM.Rifath	Male	86	80	70	80	84	79	78	85	82	82	50	66	88
2443	MI.Ihthisam	Male	48	47	33	46	39	35	44	40	26	53	44	58	42
2444	MB.Ilthifath	Male	92	74	58	67	53	72	81	84	52	78	46	59	75
2445	KM.Haseef	Male	53	45	32	27	20	49	33	42	43	44	32	45	40
2448	MN.Abdullah	Male	88	79	83	85	76	80	75	91	76	80	45	64	87
2449	MN.Hayas	Male	59	50	49	40	46	68	57	49	47	41	22	56	60
2450	MM.Siraf	Male	61	52	40	40	21	29	26	36	45	25	20	50	21
2452	MA.Ashrif	Male	29	10	25	26	9	19	14	27	24	19	20	42	33
2454	M.Fahath	Male	44	49	47	31	14	35	24	38	33	39	30	48	31
2459	MR.Hasan	Male	57	37	34	32	16	22	21	24	31	35	34	46	26
2464	A.Ahnan	Male	57	55	65	37	51	33	43	44	50	38	26	59	46
2465	R.Sahdhi	Male	40	40	24	30	11	19	25	35	40	42	22	47	15
2506	MF.Nafly	Male	36	53	62	47	45	48	42	44	37	43	34	51	46
2616	S.Abdurrahman	Male	49	50	45	44	42	39	43	31	69	41	37	53	38
2930	T.Hasif	Male	45	46	43	34	15	28	33	27	33	35	36	50	16
2674	MNM.Rislan	Male	71	73	62	67	48	65	68	72	62	65	44	66	55
2675	A.sharaf	Male	85	68	60	62	55	57	46	79	51	57	40	52	60
2676	R.Izzath	Male	41	30	41	26	20	40	26	33	36	29	40	48	25
2678	FA.Satheem	Male	37	23	29	26	10	30	18	26	38	29	36	48	33
2679	MF.Musnif	Male	39	53	56	49	27	35	30	35	35	50	32	49	27
2681	R.Rimas	Male	50	60	50	45	35	30	34	48	37	45	34	48	50
2682	AMN.Afrith	Male	45	28	36	29	10	32	25	14	32	38	36	41	25
2683	U.Mansaf	Male	56	59	50	58	58	57	42	55	58	50	36	54	45
2467	M.Muhainaf Iffath	Female	84	58	67	60	53	67	69	73	48	42	38	64	53
2471	J.Zainab saja	Female	54	37	47	45	39	33	42	39	42	30	22	37	37
2472	RF.Hana	Female	60	52	39	27	9	35	32	30	50	48	22	48	16
2475	AF.Hilma	Female	80	57	52	46	49	49	52	54	64	62	34	51	54
2476	R.Hanzul	Female	75	75	67	46	23	43	60	76	61	44	49	50	69
2477	M.Shahadha farwin	Female	85	89	70	93	85	82	83	86	80	90	82	72	90
2478	AF.Sumaiya	Female	74	71	76	49	55	41	58	75	50	74	39	56	42
2557	MRF.Sahama	Female	80	75	84	83	73	88	87	73	68	95	47	65	98
2621	MRF.Reema	Female	36	27	50	25	10	24	14	32	44	28	26	50	18
2686	MF.Zahra	Female	64	55	65	51	24	35	55	65	52	42	46	54	26
2688	IF.Riha	Female	36	51	38	24	14	37	17	41	44	36	34	37	27
2726	R.Zeenath Imthaj	Female	60	48	59	25	11	42	24	26	54	44	28	45	19
2891	NF.Reefa	Female	78	76	78	71	69	70	73	88	60	81	41	57	64

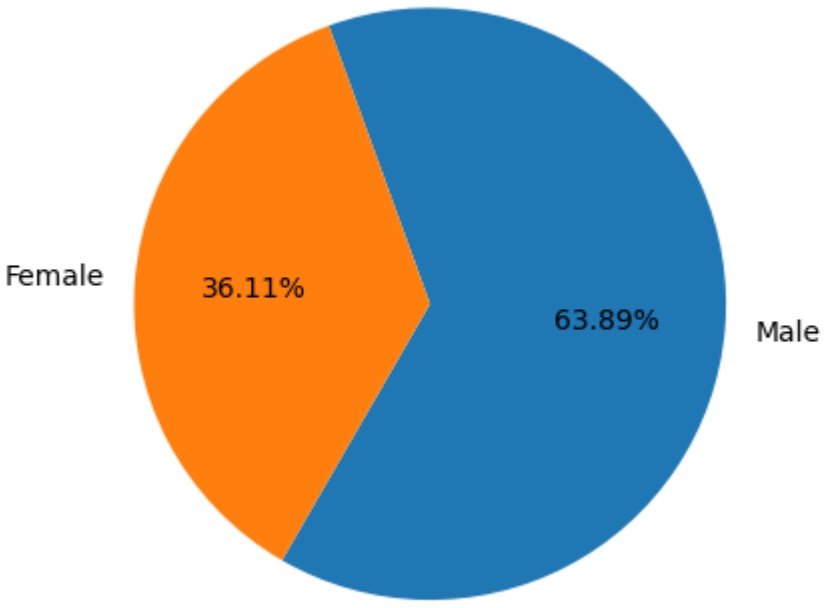
In [4]:
```
data.index.value_counts().sum()
```

Out[4]: 36

In [5]:
```
data.Gender.value_counts()
```

Out[5]:
```
Gender
Male      23
Female    13
Name: count, dtype: int64
```

In [6]:
```
plt.pie(data.Gender.value_counts(), labels=['Male', 'Female'], startangle = 240, autopct='%1.2f%%')
plt.show()
```



In [7]:
```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Index: 36 entries, 2442 to 2891
Data columns (total 15 columns):
 #   Column           Non-Null Count  Dtype
---  ------           --------------  -----
 0   name             36 non-null     object
 1   Gender           36 non-null     object
 2   islam            36 non-null     int64
 3   tamil            36 non-null     int64
 4   english          36 non-null     int64
 5   science          36 non-null     int64
 6   maths            36 non-null     int64
 7   history          36 non-null     int64
 8   civics           36 non-null     int64
 9   geog             36 non-null     int64
 10  tamlit/art/arab  36 non-null     int64
 11  pts              36 non-null     int64
 12  sinhala          36 non-null     int64
 13  helth            36 non-null     int64
 14  ict              36 non-null     int64
dtypes: int64(13), object(2)
memory usage: 4.5+ KB
```

In [8]:
```
numric_colo = []
for col in data.columns:
    if data[col].dtype!=object:
        numric_colo.append(col)
print(numric_colo)
```

```
['islam', 'tamil', 'english', 'science', 'maths', 'history', 'civics', 'geog', 'tamlit/art/arab', 'pts', 'sinhala', 'helth', 'ict']
```

In [9]:
```
sum_col = data.loc[:, numric_colo].sum(axis = 1)
```

In [10]:
```
data.loc[:, numric_colo].mean(axis = 1)
```

Out[10]:
```
index
2442    77.692308
2443    42.692308
2444    68.538462
2445    38.846154
2448    77.615385
2449    49.538462
2450    35.846154
2452    22.846154
2454    35.615385
2459    31.923077
2464    46.461538
2465    30.000000
2506    45.230769
2616    44.692308
2930    33.923077
2674    62.923077
2675    59.384615
2676    33.461538
2678    29.461538
2679    39.769231
2681    43.538462
2682    30.076923
2683    52.153846
2467    59.692308
2471    38.769231
2472    36.000000
2475    54.153846
2476    56.769231
2477    83.615385
2478    58.461538
2557    78.153846
2621    29.538462
2686    48.769231
2688    33.538462
2726    37.307692
2891    69.692308
dtype: float64
```

In [11]:
```
data['avg'] = data.loc[:, numric_colo].mean(axis = 1)
data
```

Out[11]:

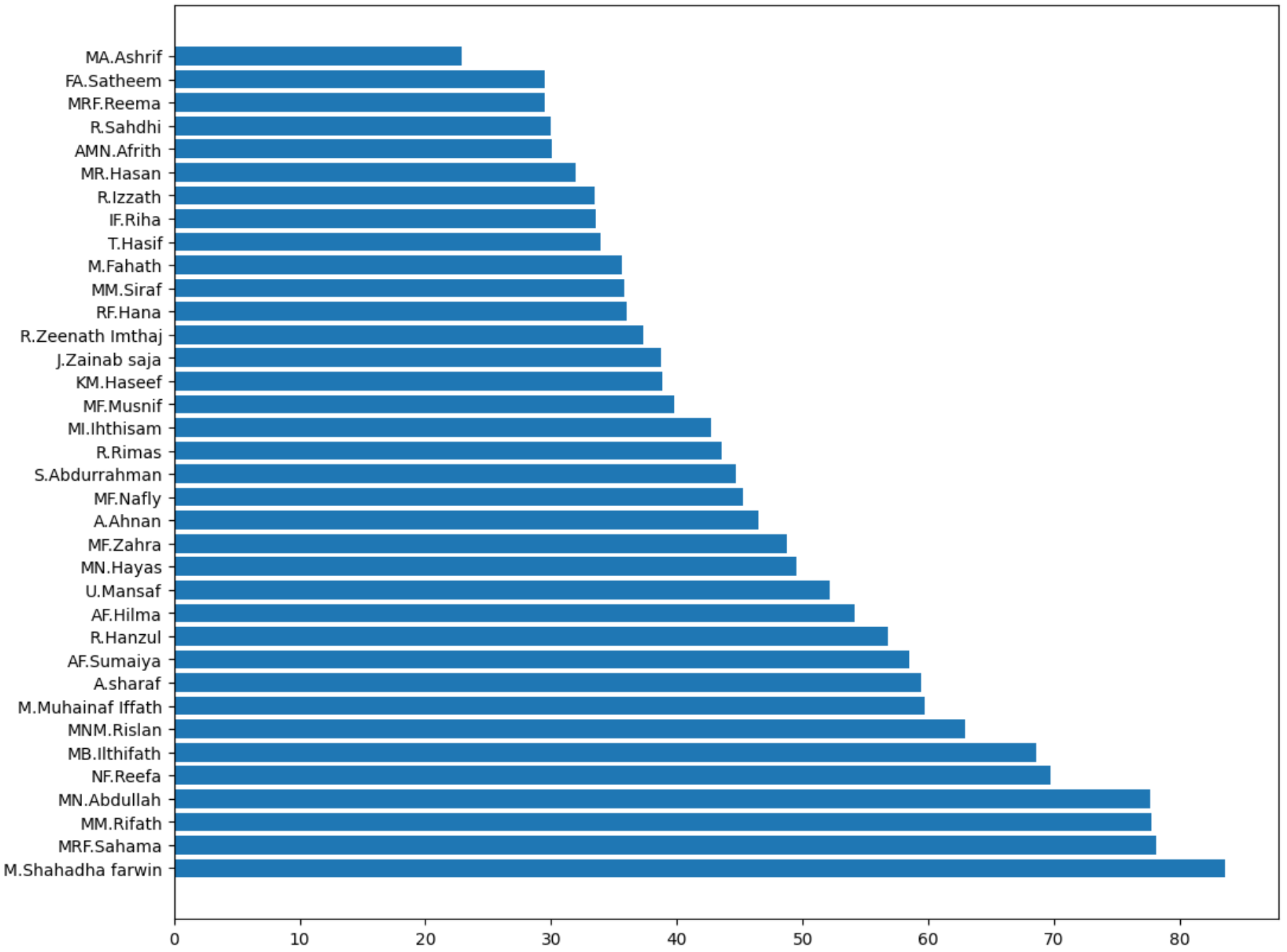
index	name	Gender	islam	tamil	english	science	maths	history	civics	geog	tamlit/art/arab	pts	sinhala	helth	ict	
2442	MM.Rifath	Male	86	80	70	80	84	79	78	85	82	82	50	66	88	77.69
2443	MI.Ihthisam	Male	48	47	33	46	39	35	44	40	26	53	44	58	42	42.69
2444	MB.Ilthifath	Male	92	74	58	67	53	72	81	84	52	78	46	59	75	68.53
2445	KM.Haseef	Male	53	45	32	27	20	49	33	42	43	44	32	45	40	38.84
2448	MN.Abdullah	Male	88	79	83	85	76	80	75	91	76	80	45	64	87	77.61
2449	MN.Hayas	Male	59	50	49	40	46	68	57	49	47	41	22	56	60	49.53
2450	MM.Siraf	Male	61	52	40	40	21	29	26	36	45	25	20	50	21	35.84
2452	MA.Ashrif	Male	29	10	25	26	9	19	14	27	24	19	20	42	33	22.84
2454	M.Fahath	Male	44	49	47	31	14	35	24	38	33	39	30	48	31	35.61
2459	MR.Hasan	Male	57	37	34	32	16	22	21	24	31	35	34	46	26	31.92
2464	A.Ahnan	Male	57	55	65	37	51	33	43	44	50	38	26	59	46	46.46
2465	R.Sahdhi	Male	40	40	24	30	11	19	25	35	40	42	22	47	15	30.00
2506	MF.Nafly	Male	36	53	62	47	45	48	42	44	37	43	34	51	46	45.23
2616	S.Abdurrahman	Male	49	50	45	44	42	39	43	31	69	41	37	53	38	44.69
2930	T.Hasif	Male	45	46	43	34	15	28	33	27	33	35	36	50	16	33.92
2674	MNM.Rislan	Male	71	73	62	67	48	65	68	72	62	65	44	66	55	62.92
2675	A.sharaf	Male	85	68	60	62	55	57	46	79	51	57	40	52	60	59.38
2676	R.Izzath	Male	41	30	41	26	20	40	26	33	36	29	40	48	25	33.46
2678	FA.Satheem	Male	37	23	29	26	10	30	18	26	38	29	36	48	33	29.46
2679	MF.Musnif	Male	39	53	56	49	27	35	30	35	35	50	32	49	27	39.76
2681	R.Rimas	Male	50	60	50	45	35	30	34	48	37	45	34	48	50	43.53
2682	AMN.Afrith	Male	45	28	36	29	10	32	25	14	32	38	36	41	25	30.07
2683	U.Mansaf	Male	56	59	50	58	58	57	42	55	58	50	36	54	45	52.15
2467	M.Muhainaf Iffath	Female	84	58	67	60	53	67	69	73	48	42	38	64	53	59.69
2471	J.Zainab saja	Female	54	37	47	45	39	33	42	39	42	30	22	37	37	38.76
2472	RF.Hana	Female	60	52	39	27	9	35	32	30	50	48	22	48	16	36.00
2475	AF.Hilma	Female	80	57	52	46	49	49	52	54	64	62	34	51	54	54.15
2476	R.Hanzul	Female	75	75	67	46	23	43	60	76	61	44	49	50	69	56.76
2477	M.Shahadha farwin	Female	85	89	70	93	85	82	83	86	80	90	82	72	90	83.61
2478	AF.Sumaiya	Female	74	71	76	49	55	41	58	75	50	74	39	56	42	58.46
2557	MRF.Sahama	Female	80	75	84	83	73	88	87	73	68	95	47	65	98	78.15
2621	MRF.Reema	Female	36	27	50	25	10	24	14	32	44	28	26	50	18	29.53
2686	MF.Zahra	Female	64	55	65	51	24	35	55	65	52	42	46	54	26	48.76
2688	IF.Riha	Female	36	51	38	24	14	37	17	41	44	36	34	37	27	33.53
2726	R.Zeenath Imthaj	Female	60	48	59	25	11	42	24	26	54	44	28	45	19	37.30
2891	NF.Reefa	Female	78	76	78	71	69	70	73	88	60	81	41	57	64	69.69

In [13]:
```
data = data.sort_values(by='avg',ascending=False)
data
```

Out[13]:

index	name	Gender	islam	tamil	english	science	maths	history	civics	geog	tamlit/art/arab	pts	sinhala	helth	ict	
2477	M.Shahadha farwin	Female	85	89	70	93	85	82	83	86	80	90	82	72	90	83.61
2557	MRF.Sahama	Female	80	75	84	83	73	88	87	73	68	95	47	65	98	78.15
2442	MM.Rifath	Male	86	80	70	80	84	79	78	85	82	82	50	66	88	77.69
2448	MN.Abdullah	Male	88	79	83	85	76	80	75	91	76	80	45	64	87	77.61
2891	NF.Reefa	Female	78	76	78	71	69	70	73	88	60	81	41	57	64	69.69
2444	MB.Ilthifath	Male	92	74	58	67	53	72	81	84	52	78	46	59	75	68.53
2674	MNM.Rislan	Male	71	73	62	67	48	65	68	72	62	65	44	66	55	62.92
2467	M.Muhainaf Iffath	Female	84	58	67	60	53	67	69	73	48	42	38	64	53	59.69
2675	A.sharaf	Male	85	68	60	62	55	57	46	79	51	57	40	52	60	59.38
2478	AF.Sumaiya	Female	74	71	76	49	55	41	58	75	50	74	39	56	42	58.46
2476	R.Hanzul	Female	75	75	67	46	23	43	60	76	61	44	49	50	69	56.76
2475	AF.Hilma	Female	80	57	52	46	49	49	52	54	64	62	34	51	54	54.15
2683	U.Mansaf	Male	56	59	50	58	58	57	42	55	58	50	36	54	45	52.15
2449	MN.Hayas	Male	59	50	49	40	46	68	57	49	47	41	22	56	60	49.53
2686	MF.Zahra	Female	64	55	65	51	24	35	55	65	52	42	46	54	26	48.76
2464	A.Ahnan	Male	57	55	65	37	51	33	43	44	50	38	26	59	46	46.46
2506	MF.Nafly	Male	36	53	62	47	45	48	42	44	37	43	34	51	46	45.23
2616	S.Abdurrahman	Male	49	50	45	44	42	39	43	31	69	41	37	53	38	44.69
2681	R.Rimas	Male	50	60	50	45	35	30	34	48	37	45	34	48	50	43.53
2443	MI.Ihthisam	Male	48	47	33	46	39	35	44	40	26	53	44	58	42	42.69
2679	MF.Musnif	Male	39	53	56	49	27	35	30	35	35	50	32	49	27	39.76
2445	KM.Haseef	Male	53	45	32	27	20	49	33	42	43	44	32	45	40	38.84
2471	J.Zainab saja	Female	54	37	47	45	39	33	42	39	42	30	22	37	37	38.76
2726	R.Zeenath Imthaj	Female	60	48	59	25	11	42	24	26	54	44	28	45	19	37.30
2472	RF.Hana	Female	60	52	39	27	9	35	32	30	50	48	22	48	16	36.00
2450	MM.Siraf	Male	61	52	40	40	21	29	26	36	45	25	20	50	21	35.84
2454	M.Fahath	Male	44	49	47	31	14	35	24	38	33	39	30	48	31	35.61
2930	T.Hasif	Male	45	46	43	34	15	28	33	27	33	35	36	50	16	33.92
2688	IF.Riha	Female	36	51	38	24	14	37	17	41	44	36	34	37	27	33.53
2676	R.Izzath	Male	41	30	41	26	20	40	26	33	36	29	40	48	25	33.46
2459	MR.Hasan	Male	57	37	34	32	16	22	21	24	31	35	34	46	26	31.92
2682	AMN.Afrith	Male	45	28	36	29	10	32	25	14	32	38	36	41	25	30.07
2465	R.Sahdhi	Male	40	40	24	30	11	19	25	35	40	42	22	47	15	30.00
2621	MRF.Reema	Female	36	27	50	25	10	24	14	32	44	28	26	50	18	29.53
2678	FA.Satheem	Male	37	23	29	26	10	30	18	26	38	29	36	48	33	29.46
2452	MA.Ashrif	Male	29	10	25	26	9	19	14	27	24	19	20	42	33	22.84

In [14]:
```
plt.figure(figsize=(12,10))
plt.barh('name', 'avg', data=data)
plt.show()
```



In [15]:
```
data.islam.max()
```

Out[15]:
```
92
```

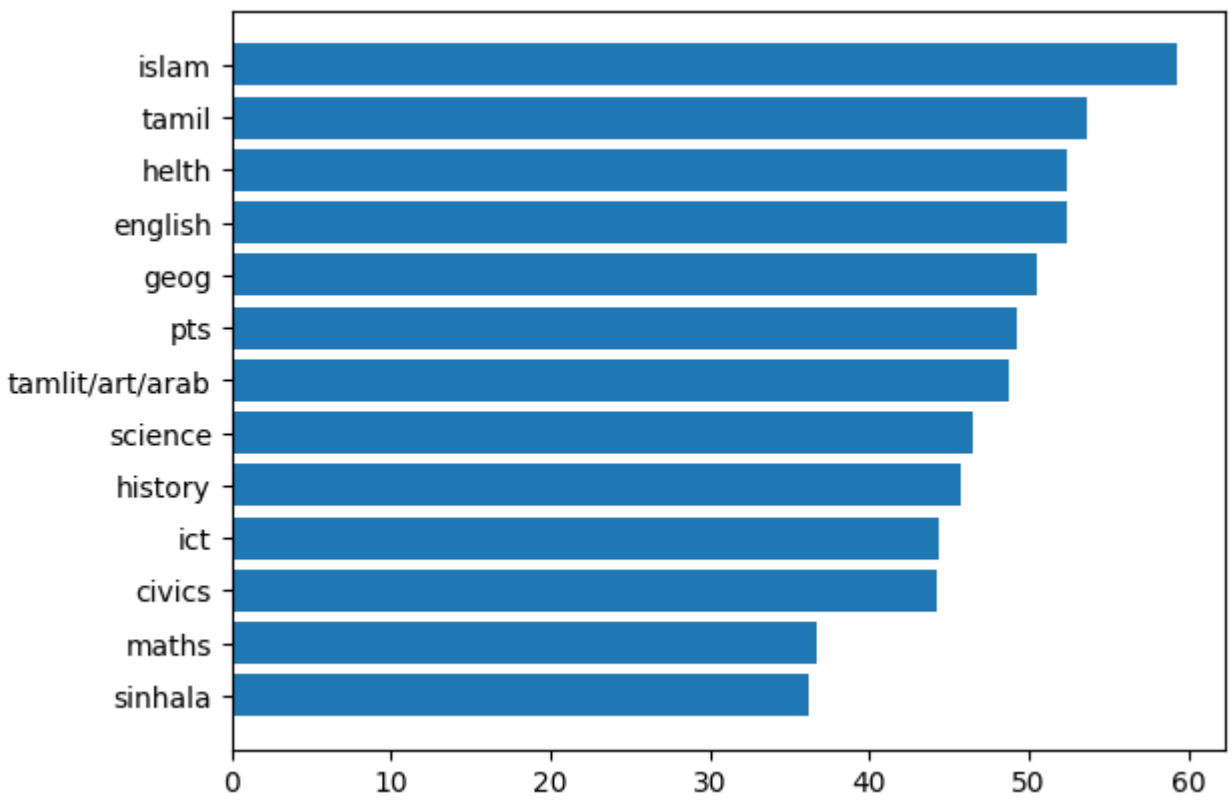
In [16]:
```
for col in numric_colo:
    print(col)
    for x in ((data[data[col] > 75 ].sort_values(by='avg',ascending=False)).index):
        print(data._get_value(x, col='name'), ":", data._get_value(x, col=col))
    print(" ")
```

```
islam
M.Shahadha farwin : 85
MRF.Sahama : 80
MM.Rifath : 86
MN.Abdullah : 88
NF.Reefa : 78
MB.Ilthifath : 92
M.Muhainaf Iffath : 84
A.sharaf : 85
AF.Hilma : 80

tamil
M.Shahadha farwin : 89
MM.Rifath : 80
MN.Abdullah : 79
NF.Reefa : 76

english
MRF.Sahama : 84
MN.Abdullah : 83
NF.Reefa : 78
AF.Sumaiya : 76

science
M.Shahadha farwin : 93
MRF.Sahama : 83
MM.Rifath : 80
MN.Abdullah : 85

maths
M.Shahadha farwin : 85
MM.Rifath : 84
MN.Abdullah : 76

history
M.Shahadha farwin : 82
MRF.Sahama : 88
MM.Rifath : 79
MN.Abdullah : 80

civics
M.Shahadha farwin : 83
MRF.Sahama : 87
MM.Rifath : 78
MB.Ilthifath : 81

geog
M.Shahadha farwin : 86
MM.Rifath : 85
MN.Abdullah : 91
NF.Reefa : 88
MB.Ilthifath : 84
A.sharaf : 79
R.Hanzul : 76

tamlit/art/arab
M.Shahadha farwin : 80
MM.Rifath : 82
MN.Abdullah : 76

pts
M.Shahadha farwin : 90
MRF.Sahama : 95
MM.Rifath : 82
MN.Abdullah : 80
NF.Reefa : 81
MB.Ilthifath : 78

sinhala
M.Shahadha farwin : 82

helth

ict
M.Shahadha farwin : 90
MRF.Sahama : 98
MM.Rifath : 88
MN.Abdullah : 87
```

In [17]:
```
subject_avg = data.loc[:, numric_colo].mean(axis = 0).sort_values()
print(subject_avg.index, subject_avg.values)
```

```
Index(['sinhala', 'maths', 'civics', 'ict', 'history', 'science',
       'tamlit/art/arab', 'pts', 'geog', 'english', 'helth', 'tamil', 'islam'],
      dtype='object') [36.22222222 36.63888889 44.27777778 44.36111111 45.75       46.47222222
 48.72222222 49.27777778 50.47222222 52.38888889 52.38888889 53.66666667
 59.27777778]
```

In [18]:
```
plt.barh(subject_avg.index, subject_avg.values)
plt.show()
```



In [19]:
```
for col in numric_colo:
    x = data[col].idxmax()
    print(f"{col.upper()} = {data._get_value(x, col='name')} : {data[col].max()}")
```

```
ISLAM = MB.Ilthifath : 92
TAMIL = M.Shahadha farwin : 89
ENGLISH = MRF.Sahama : 84
SCIENCE = M.Shahadha farwin : 93
MATHS = M.Shahadha farwin : 85
HISTORY = MRF.Sahama : 88
CIVICS = MRF.Sahama : 87
GEOG = MN.Abdullah : 91
TAMLIT/ART/ARAB = MM.Rifath : 82
PTS = MRF.Sahama : 95
SINHALA = M.Shahadha farwin : 82
HELTH = M.Shahadha farwin : 72
ICT = MRF.Sahama : 98
```

In [20]:
```
data.style.highlight_max(color = 'lightgreen', axis = 0)
```

Out[20]:

index	name	Gender	islam	tamil	english	science	maths	history	civics	geog	tamlit/art/arab	pts	sinhala	helth	ict	
2477	M.Shahadha farwin	Female	85	89	70	93	85	82	83	86	80	90	82	72	90	83.61
2557	MRF.Sahama	Female	80	75	84	83	73	88	87	73	68	95	47	65	98	78.15
2442	MM.Rifath	Male	86	80	70	80	84	79	78	85	82	82	50	66	88	77.69
2448	MN.Abdullah	Male	88	79	83	85	76	80	75	91	76	80	45	64	87	77.61
2891	NF.Reefa	Female	78	76	78	71	69	70	73	88	60	81	41	57	64	69.69
2444	MB.Ilthifath	Male	92	74	58	67	53	72	81	84	52	78	46	59	75	68.53
2674	MNM.Rislan	Male	71	73	62	67	48	65	68	72	62	65	44	66	55	62.92
2467	M.Muhainaf Iffath	Female	84	58	67	60	53	67	69	73	48	42	38	64	53	59.69
2675	A.sharaf	Male	85	68	60	62	55	57	46	79	51	57	40	52	60	59.38
2478	AF.Sumaiya	Female	74	71	76	49	55	41	58	75	50	74	39	56	42	58.46
2476	R.Hanzul	Female	75	75	67	46	23	43	60	76	61	44	49	50	69	56.76
2475	AF.Hilma	Female	80	57	52	46	49	49	52	54	64	62	34	51	54	54.15
2683	U.Mansaf	Male	56	59	50	58	58	57	42	55	58	50	36	54	45	52.15
2449	MN.Hayas	Male	59	50	49	40	46	68	57	49	47	41	22	56	60	49.53
2686	MF.Zahra	Female	64	55	65	51	24	35	55	65	52	42	46	54	26	48.76
2464	A.Ahnan	Male	57	55	65	37	51	33	43	44	50	38	26	59	46	46.46
2506	MF.Nafly	Male	36	53	62	47	45	48	42	44	37	43	34	51	46	45.23
2616	S.Abdurrahman	Male	49	50	45	44	42	39	43	31	69	41	37	53	38	44.69
2681	R.Rimas	Male	50	60	50	45	35	30	34	48	37	45	34	48	50	43.53
2443	MI.Ihthisam	Male	48	47	33	46	39	35	44	40	26	53	44	58	42	42.69
2679	MF.Musnif	Male	39	53	56	49	27	35	30	35	35	50	32	49	27	39.76
2445	KM.Haseef	Male	53	45	32	27	20	49	33	42	43	44	32	45	40	38.84
2471	J.Zainab saja	Female	54	37	47	45	39	33	42	39	42	30	22	37	37	38.76
2726	R.Zeenath Imthaj	Female	60	48	59	25	11	42	24	26	54	44	28	45	19	37.30
2472	RF.Hana	Female	60	52	39	27	9	35	32	30	50	48	22	48	16	36.00
2450	MM.Siraf	Male	61	52	40	40	21	29	26	36	45	25	20	50	21	35.84
2454	M.Fahath	Male	44	49	47	31	14	35	24	38	33	39	30	48	31	35.61
2930	T.Hasif	Male	45	46	43	34	15	28	33	27	33	35	36	50	16	33.92
2688	IF.Riha	Female	36	51	38	24	14	37	17	41	44	36	34	37	27	33.53
2676	R.Izzath	Male	41	30	41	26	20	40	26	33	36	29	40	48	25	33.46
2459	MR.Hasan	Male	57	37	34	32	16	22	21	24	31	35	34	46	26	31.92
2682	AMN.Afrith	Male	45	28	36	29	10	32	25	14	32	38	36	41	25	30.07
2465	R.Sahdhi	Male	40	40	24	30	11	19	25	35	40	42	22	47	15	30.00
2621	MRF.Reema	Female	36	27	50	25	10	24	14	32	44	28	26	50	18	29.53
2678	FA.Satheem	Male	37	23	29	26	10	30	18	26	38	29	36	48	33	29.46
2452	MA.Ashrif	Male	29	10	25	26	9	19	14	27	24	19	20	42	33	22.84

In [21]:
```
data = data.sort_values(by='avg', ascending=False)
data
```

Out[21]:

index	name	Gender	islam	tamil	english	science	maths	history	civics	geog	tamlit/art/arab	pts	sinhala	helth	ict	
2477	M.Shahadha farwin	Female	85	89	70	93	85	82	83	86	80	90	82	72	90	83.61
2557	MRF.Sahama	Female	80	75	84	83	73	88	87	73	68	95	47	65	98	78.15
2442	MM.Rifath	Male	86	80	70	80	84	79	78	85	82	82	50	66	88	77.69
2448	MN.Abdullah	Male	88	79	83	85	76	80	75	91	76	80	45	64	87	77.61
2891	NF.Reefa	Female	78	76	78	71	69	70	73	88	60	81	41	57	64	69.69
2444	MB.Ilthifath	Male	92	74	58	67	53	72	81	84	52	78	46	59	75	68.53
2674	MNM.Rislan	Male	71	73	62	67	48	65	68	72	62	65	44	66	55	62.92
2467	M.Muhainaf Iffath	Female	84	58	67	60	53	67	69	73	48	42	38	64	53	59.69
2675	A.sharaf	Male	85	68	60	62	55	57	46	79	51	57	40	52	60	59.38
2478	AF.Sumaiya	Female	74	71	76	49	55	41	58	75	50	74	39	56	42	58.46
2476	R.Hanzul	Female	75	75	67	46	23	43	60	76	61	44	49	50	69	56.76
2475	AF.Hilma	Female	80	57	52	46	49	49	52	54	64	62	34	51	54	54.15
2683	U.Mansaf	Male	56	59	50	58	58	57	42	55	58	50	36	54	45	52.15
2449	MN.Hayas	Male	59	50	49	40	46	68	57	49	47	41	22	56	60	49.53
2686	MF.Zahra	Female	64	55	65	51	24	35	55	65	52	42	46	54	26	48.76
2464	A.Ahnan	Male	57	55	65	37	51	33	43	44	50	38	26	59	46	46.46
2506	MF.Nafly	Male	36	53	62	47	45	48	42	44	37	43	34	51	46	45.23
2616	S.Abdurrahman	Male	49	50	45	44	42	39	43	31	69	41	37	53	38	44.69
2681	R.Rimas	Male	50	60	50	45	35	30	34	48	37	45	34	48	50	43.53
2443	MI.Ihthisam	Male	48	47	33	46	39	35	44	40	26	53	44	58	42	42.69
2679	MF.Musnif	Male	39	53	56	49	27	35	30	35	35	50	32	49	27	39.76
2445	KM.Haseef	Male	53	45	32	27	20	49	33	42	43	44	32	45	40	38.84
2471	J.Zainab saja	Female	54	37	47	45	39	33	42	39	42	30	22	37	37	38.76
2726	R.Zeenath Imthaj	Female	60	48	59	25	11	42	24	26	54	44	28	45	19	37.30
2472	RF.Hana	Female	60	52	39	27	9	35	32	30	50	48	22	48	16	36.00
2450	MM.Siraf	Male	61	52	40	40	21	29	26	36	45	25	20	50	21	35.84
2454	M.Fahath	Male	44	49	47	31	14	35	24	38	33	39	30	48	31	35.61
2930	T.Hasif	Male	45	46	43	34	15	28	33	27	33	35	36	50	16	33.92
2688	IF.Riha	Female	36	51	38	24	14	37	17	41	44	36	34	37	27	33.53
2676	R.Izzath	Male	41	30	41	26	20	40	26	33	36	29	40	48	25	33.46
2459	MR.Hasan	Male	57	37	34	32	16	22	21	24	31	35	34	46	26	31.92
2682	AMN.Afrith	Male	45	28	36	29	10	32	25	14	32	38	36	41	25	30.07
2465	R.Sahdhi	Male	40	40	24	30	11	19	25	35	40	42	22	47	15	30.00
2621	MRF.Reema	Female	36	27	50	25	10	24	14	32	44	28	26	50	18	29.53
2678	FA.Satheem	Male	37	23	29	26	10	30	18	26	38	29	36	48	33	29.46
2452	MA.Ashrif	Male	29	10	25	26	9	19	14	27	24	19	20	42	33	22.84

In [22]:
```
def highlight_max(s):
    if s.dtype == object or s.dtype == np.float64:
        is_max = [False for _ in range(s.shape[0])]
    else:
        is_max = s == s.max()
    return ['background: lightgreen' if cell else '' for cell in is_max]

data.style.apply(highlight_max)
```

Out[22]:

index	name	Gender	islam	tamil	english	science	maths	history	civics	geog	tamlit/art/arab	pts	sinhala	helth	ict	
2477	M.Shahadha farwin	Female	85	89	70	93	85	82	83	86	80	90	82	72	90	83.61
2557	MRF.Sahama	Female	80	75	84	83	73	88	87	73	68	95	47	65	98	78.15
2442	MM.Rifath	Male	86	80	70	80	84	79	78	85	82	82	50	66	88	77.69
2448	MN.Abdullah	Male	88	79	83	85	76	80	75	91	76	80	45	64	87	77.61
2891	NF.Reefa	Female	78	76	78	71	69	70	73	88	60	81	41	57	64	69.69
2444	MB.Ilthifath	Male	92	74	58	67	53	72	81	84	52	78	46	59	75	68.53
2674	MNM.Rislan	Male	71	73	62	67	48	65	68	72	62	65	44	66	55	62.92
2467	M.Muhainaf Iffath	Female	84	58	67	60	53	67	69	73	48	42	38	64	53	59.69
2675	A.sharaf	Male	85	68	60	62	55	57	46	79	51	57	40	52	60	59.38
2478	AF.Sumaiya	Female	74	71	76	49	55	41	58	75	50	74	39	56	42	58.46
2476	R.Hanzul	Female	75	75	67	46	23	43	60	76	61	44	49	50	69	56.76
2475	AF.Hilma	Female	80	57	52	46	49	49	52	54	64	62	34	51	54	54.15
2683	U.Mansaf	Male	56	59	50	58	58	57	42	55	58	50	36	54	45	52.15
2449	MN.Hayas	Male	59	50	49	40	46	68	57	49	47	41	22	56	60	49.53
2686	MF.Zahra	Female	64	55	65	51	24	35	55	65	52	42	46	54	26	48.76
2464	A.Ahnan	Male	57	55	65	37	51	33	43	44	50	38	26	59	46	46.46
2506	MF.Nafly	Male	36	53	62	47	45	48	42	44	37	43	34	51	46	45.23
2616	S.Abdurrahman	Male	49	50	45	44	42	39	43	31	69	41	37	53	38	44.69
2681	R.Rimas	Male	50	60	50	45	35	30	34	48	37	45	34	48	50	43.53
2443	MI.Ihthisam	Male	48	47	33	46	39	35	44	40	26	53	44	58	42	42.69
2679	MF.Musnif	Male	39	53	56	49	27	35	30	35	35	50	32	49	27	39.76
2445	KM.Haseef	Male	53	45	32	27	20	49	33	42	43	44	32	45	40	38.84
2471	J.Zainab saja	Female	54	37	47	45	39	33	42	39	42	30	22	37	37	38.76
2726	R.Zeenath Imthaj	Female	60	48	59	25	11	42	24	26	54	44	28	45	19	37.30
2472	RF.Hana	Female	60	52	39	27	9	35	32	30	50	48	22	48	16	36.00
2450	MM.Siraf	Male	61	52	40	40	21	29	26	36	45	25	20	50	21	35.84
2454	M.Fahath	Male	44	49	47	31	14	35	24	38	33	39	30	48	31	35.61
2930	T.Hasif	Male	45	46	43	34	15	28	33	27	33	35	36	50	16	33.92
2688	IF.Riha	Female	36	51	38	24	14	37	17	41	44	36	34	37	27	33.53
2676	R.Izzath	Male	41	30	41	26	20	40	26	33	36	29	40	48	25	33.46
2459	MR.Hasan	Male	57	37	34	32	16	22	21	24	31	35	34	46	26	31.92
2682	AMN.Afrith	Male	45	28	36	29	10	32	25	14	32	38	36	41	25	30.07
2465	R.Sahdhi	Male	40	40	24	30	11	19	25	35	40	42	22	47	15	30.00
2621	MRF.Reema	Female	36	27	50	25	10	24	14	32	44	28	26	50	18	29.53
2678	FA.Satheem	Male	37	23	29	26	10	30	18	26	38	29	36	48	33	29.46
2452	MA.Ashrif	Male	29	10	25	26	9	19	14	27	24	19	20	42	33	22.84

In [23]:
```
boys = data[data['Gender']=="Male"]
#boys

def highlight_max(s):
    if s.dtype == object or s.dtype == np.float64:
        is_max = [False for _ in range(s.shape[0])]
    else:
        is_max = s == s.max()
    return ['background: lightgreen' if cell else '' for cell in is_max]

boys.style.apply(highlight_max)
```

Out[23]:

index	name	Gender	islam	tamil	english	science	maths	history	civics	geog	tamlit/art/arab	pts	sinhala	helth	ict	
2442	MM.Rifath	Male	86	80	70	80	84	79	78	85	82	82	50	66	88	77.69
2448	MN.Abdullah	Male	88	79	83	85	76	80	75	91	76	80	45	64	87	77.61
2444	MB.Ilthifath	Male	92	74	58	67	53	72	81	84	52	78	46	59	75	68.53
2674	MNM.Rislan	Male	71	73	62	67	48	65	68	72	62	65	44	66	55	62.92
2675	A.sharaf	Male	85	68	60	62	55	57	46	79	51	57	40	52	60	59.38
2683	U.Mansaf	Male	56	59	50	58	58	57	42	55	58	50	36	54	45	52.15
2449	MN.Hayas	Male	59	50	49	40	46	68	57	49	47	41	22	56	60	49.53
2464	A.Ahnan	Male	57	55	65	37	51	33	43	44	50	38	26	59	46	46.46
2506	MF.Nafly	Male	36	53	62	47	45	48	42	44	37	43	34	51	46	45.23
2616	S.Abdurrahman	Male	49	50	45	44	42	39	43	31	69	41	37	53	38	44.69
2681	R.Rimas	Male	50	60	50	45	35	30	34	48	37	45	34	48	50	43.53
2443	MI.Ihthisam	Male	48	47	33	46	39	35	44	40	26	53	44	58	42	42.69
2679	MF.Musnif	Male	39	53	56	49	27	35	30	35	35	50	32	49	27	39.76
2445	KM.Haseef	Male	53	45	32	27	20	49	33	42	43	44	32	45	40	38.84
2450	MM.Siraf	Male	61	52	40	40	21	29	26	36	45	25	20	50	21	35.84
2454	M.Fahath	Male	44	49	47	31	14	35	24	38	33	39	30	48	31	35.61
2930	T.Hasif	Male	45	46	43	34	15	28	33	27	33	35	36	50	16	33.92
2676	R.Izzath	Male	41	30	41	26	20	40	26	33	36	29	40	48	25	33.46
2459	MR.Hasan	Male	57	37	34	32	16	22	21	24	31	35	34	46	26	31.92
2682	AMN.Afrith	Male	45	28	36	29	10	32	25	14	32	38	36	41	25	30.07
2465	R.Sahdhi	Male	40	40	24	30	11	19	25	35	40	42	22	47	15	30.00
2678	FA.Satheem	Male	37	23	29	26	10	30	18	26	38	29	36	48	33	29.46
2452	MA.Ashrif	Male	29	10	25	26	9	19	14	27	24	19	20	42	33	22.84

In [24]:
```
girls = data[data['Gender']=="Female"]
#girls

def highlight_max(s):
    if s.dtype == object or s.dtype == np.float64:
        is_max = [False for _ in range(s.shape[0])]
    else:
        is_max = s == s.max()
    return ['background: lightgreen' if cell else '' for cell in is_max]

girls.style.apply(highlight_max)
```

Out[24]:

index	name	Gender	islam	tamil	english	science	maths	history	civics	geog	tamlit/art/arab	pts	sinhala	helth	ict	a
2477	M.Shahadha farwin	Female	85	89	70	93	85	82	83	86	80	90	82	72	90	83.6153
2557	MRF.Sahama	Female	80	75	84	83	73	88	87	73	68	95	47	65	98	78.1538
2891	NF.Reefa	Female	78	76	78	71	69	70	73	88	60	81	41	57	64	69.6923
2467	M.Muhainaf Iffath	Female	84	58	67	60	53	67	69	73	48	42	38	64	53	59.6923
2478	AF.Sumaiya	Female	74	71	76	49	55	41	58	75	50	74	39	56	42	58.4615
2476	R.Hanzul	Female	75	75	67	46	23	43	60	76	61	44	49	50	69	56.7692
2475	AF.Hilma	Female	80	57	52	46	49	49	52	54	64	62	34	51	54	54.1538
2686	MF.Zahra	Female	64	55	65	51	24	35	55	65	52	42	46	54	26	48.7692
2471	J.Zainab saja	Female	54	37	47	45	39	33	42	39	42	30	22	37	37	38.7692
2726	R.Zeenath Imthaj	Female	60	48	59	25	11	42	24	26	54	44	28	45	19	37.3076
2472	RF.Hana	Female	60	52	39	27	9	35	32	30	50	48	22	48	16	36.0000
2688	IF.Riha	Female	36	51	38	24	14	37	17	41	44	36	34	37	27	33.5384
2621	MRF.Reema	Female	36	27	50	25	10	24	14	32	44	28	26	50	18	29.5384

In [31]:
```
x = boys[boys['avg'] == boys.avg.max()].index[0]

print("Firs rank in boys:")
print(f"\t name: {boys._get_value(x, col='name')}\n"
      f"\t index: {x}\n"
      f"\t Total: {sum_col._get_value(x)}\n"
      f"\t Average: {boys._get_value(x, col='avg')}")
```

```
Firs rank in boys:
         name: MM.Rifath
         index: 2442
         Total: 1010
         Average: 77.6923076923077
```

In [32]:
```
x = boys[boys['avg'] == boys.avg.min()].index[0]

print("Last Rank in boys:")
print(f"\t name: {boys._get_value(x, col='name')}\n"
      f"\t index: {x}\n"
      f"\t Total: {sum_col._get_value(x)}\n"
      f"\t Average: {boys._get_value(x, col='avg')}")
```

```
Last Rank in boys:
         name: MA.Ashrif
         index: 2452
         Total: 297
         Average: 22.846153846153847
```

In [35]:
```
x = girls[girls['avg'] == girls.avg.max()].index[0]

print("Firs rank in girls:")
print(f"\t name: {girls._get_value(x, col='name')}\n"
      f"\t index: {x}\n"
      f"\t Total: {sum_col._get_value(x)}\n"
      f"\t Average: {girls._get_value(x, col='avg')}")
```

```
Firs rank in girls:
         name: M.Shahadha farwin
         index: 2477
         Total: 1087
         Average: 83.61538461538461
```

In [36]:
```
x = girls[girls['avg'] == girls.avg.max()].index[0]

print("Firs rank in girls:")
print(f"\t name: {girls._get_value(x, col='name')}\n"
      f"\t index: {x}\n"
      f"\t Total: {sum_col._get_value(x)}\n"
      f"\t Average: {girls._get_value(x, col='avg')}")
```

```
Firs rank in girls:
         name: M.Shahadha farwin
         index: 2477
         Total: 1087
         Average: 83.61538461538461
```

Ruzaid Ahamed