ASSESSMENT_DATA_ONLINE_37_STUD... | Programming Exercise.R | main_dataframe

Filter

| | Student_Number | Gender | Age | Favorite_Subject | Favorite_Color | Height | Weight | General_Mathematics | Statistics_and_Probability | Earth_Science | Media_and_Information_Literacy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2019-10227-MN-0 | Male | 20 | Science | Red | 169.000 | 60.0 | 84 | 89 | 94 | 98.0 |
| 2 | 2019-11438-MN-0 | Male | 20 | Science | Red | 174.000 | 90.0 | 91 | 80 | 86 | 87.0 |
| 3 | 2020-00850-MN-0 | Male | 19 | English | Red | 175.260 | 47.0 | 0 | 0 | 0 | 96.0 |
| 4 | 2020-00864-MN-0 | Female | 19 | Math | Yellow | 162.000 | 52.0 | 90 | 96 | 96 | 95.0 |
| 5 | 2020-08862-MN-0 | Female | 19 | Science | Red | 171.000 | 65.0 | 90 | 89 | 89 | 92.0 |
| 6 | 2020-08863-MN-0 | Male | 19 | Science | Blue | 176.700 | 94.0 | 87 | 95 | 92 | 97.0 |
| 7 | 2020-08864-MN-0 | Female | 19 | English | Blue | 163.000 | 60.0 | 94 | 94 | 90 | 94.0 |
| 8 | 2020-08865-MN-0 | Male | 18 | English | Blue | 158.000 | 65.0 | 84 | 94 | 91 | 90.0 |
| 9 | 2020-08867-MN-0 | Male | 18 | Math | Blue | 170.000 | 62.0 | 92 | 92 | 91 | 98.0 |
| 10 | 2020-08868-MN-0 | Male | 19 | English | Red | 170.000 | 54.0 | 94 | 92 | 93 | 91.0 |
| 11 | 2020-08869-MN-0 | Male | 19 | Science | Green | 175.000 | 55.0 | 91 | 99 | 91 | 90.0 |
| 12 | 2020-10375-MN-0 | Male | 19 | Science | Blue | 163.000 | 55.0 | 90 | 91 | 94 | 96.0 |
| 13 | 2020-10769-MN-0 | Male | 18 | Math | Blue | 172.720 | 57.0 | 92 | 97 | 92 | 95.0 |
| 14 | 2020-10860-MN-0 | Female | 18 | Math | Blue | 150.000 | 43.0 | 95 | 89 | 92 | 91.0 |
| 15 | 2020-10861-MN-0 | Male | 19 | Science | Blue | 165.000 | 65.0 | 90 | 88 | 87 | 89.0 |
| 16 | 2020-10902-MN-0 | Male | 19 | Math | Blue | 167.670 | 79.0 | 93 | 94 | 90 | 92.0 |
| 17 | 2020-10931-MN-0 | Male | 19 | Math | Blue | 164.000 | 48.0 | 93 | 92 | 91 | 89.0 |
| 18 | 2020-10951-MN-0 | Male | 18 | Math | Blue | 173.000 | 62.0 | 92 | 95 | 91 | 92.0 |
| 19 | 2020-10955-MN-0 | Male | 19 | Math | Blue | 161.000 | 57.0 | 89 | 86 | 92 | 95.0 |
| 20 | 2020-10963-MN-0 | Male | 20 | English | Blue | 162.000 | 42.0 | 93 | 94 | 91 | 95.0 |
| 21 | 2020-10965-MN-0 | Female | 19 | Math | Green | 152.000 | 48.0 | 95 | 94 | 91 | 93.0 |
| 22 | 2020-10978-MN-0 | Male | 18 | Math | Red | 167.640 | 46.0 | 91 | 95 | 94 | 94.0 |
| 23 | 2020-11006-MN-0 | Male | 19 | Science | Red | 170.000 | 57.0 | 90 | 95 | 92 | 96.0 |
| 24 | 2020-11048-MN-0 | Male | 19 | Math | Blue | 166.000 | 60.0 | 96 | 83 | 0 | 93.5 |
| 25 | 2020-11051-MN-0 | Female | 19 | Science | Blue | 156.000 | 48.0 | 89 | 89 | 87 | 94.0 |
| 26 | 2020-11067-MN-0 | Male | 18 | Science | Green | 167.000 | 70.0 | 95 | 92 | 95 | 94.0 |
| 27 | 2020-11072-MN-0 | Male | 18 | Science | Red | 168.000 | 73.5 | 90 | 92 | 90 | 90.0 |
| 28 | 2020-11091-MN-0 | Male | 19 | Science | Blue | 165.000 | 45.0 | 89 | 92 | 92 | 96.0 |
| 29 | 2020-11110-MN-0 | Male | 19 | Science | Blue | 165.100 | 65.0 | 95 | 94 | 92 | 98.0 |
| 30 | 2020-12446-MN-0 | Male | 19 | Science | Green | 170.000 | 61.0 | 89 | 93 | 90 | 93.0 |
| 31 | 2020-12540-MN-0 | Female | 19 | Science | Blue | 157.480 | 60.0 | 0 | 0 | 0 | 0.0 |
| 32 | 2020-12541-MN-0 | Male | 18 | Science | Blue | 165.000 | 63.0 | 90 | 92 | 88 | 91.0 |
| 33 | 2020-12753-MN-0 | Male | 19 | Science | Blue | 173.736 | 52.0 | 91 | 86 | 90 | 92.0 |
| 34 | 2020-12765-MN-0 | Female | 18 | Science | Blue | 157.000 | 45.0 | 86 | 90 | 93 | 93.0 |
| 35 | 2020-12792-MN-0 | Male | 18 | Math | Red | 160.500 | 63.0 | 96 | 88 | 95 | 94.0 |
| 36 | 2020-12794-MN-0 | Female | 19 | English | Red | 160.000 | 58.0 | 94 | 93 | 92 | 95.0 |
| 37 | 2020-13575-MN-0 | Male | 19 | Science | Blue | 177.000 | 65.0 | 89 | 90 | 87 | 92.0 |

**1.Data Frame with all the variables in the excel file. (As table)**

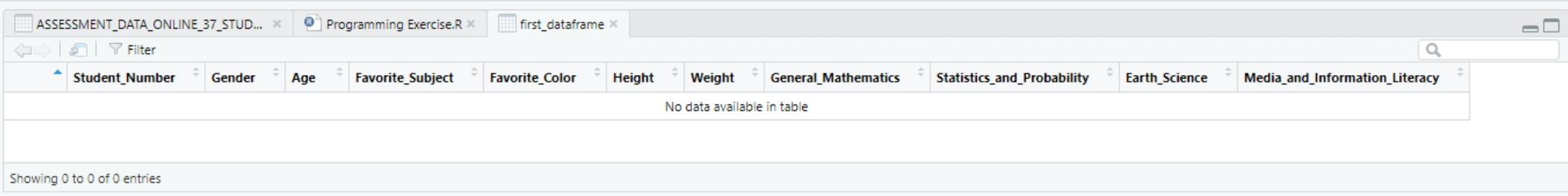
Showing 1 to 37 of 37 entries, 11 total columns

Console | Terminal | Jobs

~/ACAD College/

```
> View(main_dataframe)
> main_dataframe
    Student_Number Gender Age Favorite_Subject Favorite_Color  Height Weight General_Mathematics Statistics_and_Probability Earth_Science
1   2019-10227-MN-0   Male  20          Science            Red 169.000   60.0                 84                        89            94
2   2019-11438-MN-0   Male  20          Science            Red 174.000   90.0                 91                        80            86
3   2020-00850-MN-0   Male  19          English            Red 175.260   47.0                  0                         0             0
4   2020-00864-MN-0 Female  19             Math         Yellow 162.000   52.0                 90                        96            96
5   2020-08862-MN-0 Female  19          Science            Red 171.000   65.0                 90                        89            89
6   2020-08863-MN-0   Male  19          Science           Blue 176.700   94.0                 87                        95            92
7   2020-08864-MN-0 Female  19          English           Blue 163.000   60.0                 94                        94            90
8   2020-08865-MN-0   Male  18          English           Blue 158.000   65.0                 84                        94            91
9   2020-08867-MN-0   Male  18             Math           Blue 170.000   62.0                 92                        92            91
10 2020-08868-MN-0   Male  19          English            Red 170.000   54.0                 94                        92            93
11 2020-08869-MN-0   Male  19          Science          Green 175.000   55.0                 91                        99            91
12 2020-10375-MN-0   Male  19          Science           Blue 163.000   55.0                 90                        91            94
13 2020-10769-MN-0   Male  18             Math           Blue 172.720   57.0                 92                        97            92
14 2020-10860-MN-0 Female  18             Math           Blue 150.000   43.0                 95                        89            92
15 2020-10861-MN-0   Male  19          Science           Blue 165.000   65.0                 90                        88            87
16 2020-10902-MN-0   Male  19             Math           Blue 167.670   79.0                 93                        94            90
17 2020-10931-MN-0   Male  19             Math           Blue 164.000   48.0                 93                        92            91
18 2020-10951-MN-0   Male  18             Math           Blue 173.000   62.0                 92                        95            91
19 2020-10955-MN-0   Male  19             Math           Blue 161.000   57.0                 89                        86            92
20 2020-10963-MN-0   Male  20          English           Blue 162.000   42.0                 93                        94            91
21 2020-10965-MN-0 Female  19             Math          Green 152.000   48.0                 95                        94            91
22 2020-10978-MN-0   Male  18             Math            Red 167.640   46.0                 91                        95            94
23 2020-11006-MN-0   Male  19          Science            Red 170.000   57.0                 90                        95            92
24 2020-11048-MN-0   Male  19             Math           Blue 166.000   60.0                 96                        83             0
25 2020-11051-MN-0 Female  19          Science           Blue 156.000   48.0                 89                        89            87
26 2020-11067-MN-0   Male  18          Science          Green 167.000   70.0                 95                        92            95
27 2020-11072-MN-0   Male  18          Science            Red 168.000   73.5                 90                        92            90
28 2020-11091-MN-0   Male  19          Science           Blue 165.000   45.0                 89                        92            92
29 2020-11110-MN-0   Male  19          Science           Blue 165.100   65.0                 95                        94            92
30 2020-12446-MN-0   Male  19          Science          Green 170.000   61.0                 89                        93            90
31 2020-12540-MN-0 Female  19          Science           Blue 157.480   60.0                  0                         0             0
32 2020-12541-MN-0   Male  18          Science           Blue 165.000   63.0                 90                        92            88
33 2020-12753-MN-0   Male  19          Science           Blue 173.736   52.0                 91                        86            90
34 2020-12765-MN-0 Female  18          Science           Blue 157.000   45.0                 86                        90            93
35 2020-12792-MN-0   Male  18             Math            Red 160.500   63.0                 96                        88            95
36 2020-12794-MN-0 Female  19          English            Red 160.000   58.0                 94                        93            92
37 2020-13575-MN-0   Male  19          Science           Blue 177.000   65.0                 89                        90            87
   Media_and_Information_Literacy
1                            98.0
2                            87.0
3                            96.0
4                            95.0
5                            92.0
6                            97.0
7                            94.0
8                            90.0
9                            98.0
10                           91.0
11                           90.0
12                           96.0
13                           95.0
14                           91.0
15                           89.0
16                           92.0
17                           89.0
18                           92.0
19                           95.0
20                           95.0
21                           93.0
22                           94.0
23                           96.0
24                           93.5
25                           94.0
26                           94.0
27                           90.0
28                           96.0
29                           98.0
30                           93.0
31                            0.0
32                           91.0
33                           92.0
34                           93.0
35                           94.0
36                           95.0
37                           92.0
> ==
```

**1.Data Frame with all the variables in the excel file. (In console)**




**2.1 All male who like color red and at least 21 years old.**

ASSESSMENT_DATA_ONLINE_37_STUD... | Programming Exercise.R | second_dataframe

Filter

| | Student_Number | Gender | Age | Favorite_Subject | Favorite_Color | Height | Weight | General_Mathematics | Statistics_and_Probability | Earth_Science | Media_and_Information_Literacy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 2020-10375-MN-0 | Male | 19 | Science | Blue | 163.000 | 55 | 90 | 91 | 94 | 96.0 |
| 13 | 2020-10769-MN-0 | Male | 18 | Math | Blue | 172.720 | 57 | 92 | 97 | 92 | 95.0 |
| 17 | 2020-10931-MN-0 | Male | 19 | Math | Blue | 164.000 | 48 | 93 | 92 | 91 | 89.0 |
| 19 | 2020-10955-MN-0 | Male | 19 | Math | Blue | 161.000 | 57 | 89 | 86 | 92 | 95.0 |
| 20 | 2020-10963-MN-0 | Male | 20 | English | Blue | 162.000 | 42 | 93 | 94 | 91 | 95.0 |
| 24 | 2020-11048-MN-0 | Male | 19 | Math | Blue | 166.000 | 60 | 96 | 83 | 0 | 93.5 |
| 28 | 2020-11091-MN-0 | Male | 19 | Science | Blue | 165.000 | 45 | 89 | 92 | 92 | 96.0 |
| 33 | 2020-12753-MN-0 | Male | 19 | Science | Blue | 173.736 | 52 | 91 | 86 | 90 | 92.0 |

Showing 1 to 8 of 8 entries, 11 total columns

Console | Terminal | Jobs

~/ACAD College/

```
> View(second_dataframe)
> second_dataframe
    Student_Number Gender Age Favorite_Subject Favorite_Color  Height Weight General_Mathematics Statistics_and_Probability Earth_Science
12 2020-10375-MN-0   Male  19          Science           Blue 163.000     55                 90                          91            94
13 2020-10769-MN-0   Male  18             Math           Blue 172.720     57                 92                          97            92
17 2020-10931-MN-0   Male  19             Math           Blue 164.000     48                 93                          92            91
19 2020-10955-MN-0   Male  19             Math           Blue 161.000     57                 89                          86            92
20 2020-10963-MN-0   Male  20          English           Blue 162.000     42                 93                          94            91
24 2020-11048-MN-0   Male  19             Math           Blue 166.000     60                 96                          83             0
28 2020-11091-MN-0   Male  19          Science           Blue 165.000     45                 89                          92            92
33 2020-12753-MN-0   Male  19          Science           Blue 173.736     52                 91                          86            90
   Media_and_Information_Literacy
12                           96.0
13                           95.0
17                           89.0
19                           95.0
20                           95.0
24                           93.5
28                           96.0
33                           92.0
> |
```

**2.2 All male who like color blue and at most 60 kilos.**

ASSESSMENT_DATA_ONLINE_37_STUD... | Programming Exercise.R | third_dataframe

Filter

| | Student_Number | Gender | Age | Favorite_Subject | Favorite_Color | Height | Weight | General_Mathematics | Statistics_and_Probability | Earth_Science | Media_and_Information_Literacy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 2020-00864-MN-0 | Female | 19 | Math | Yellow | 162 | 52 | 90 | 96 | 96 | 95 |

Showing 1 to 1 of 1 entries, 11 total columns

Console | Terminal | Jobs

~/ACAD College/

```
> View(third_dataframe)
> third_dataframe
   Student_Number Gender Age Favorite_Subject Favorite_Color Height Weight General_Mathematics Statistics_and_Probability Earth_Science
4 2020-00864-MN-0 Female  19            Math         Yellow    162     52                  90                         96            96
  Media_and_Information_Literacy
4                             95
>
```

**2.3 All female who like color yellow and more than 150 cm.**

ASSESSMENT_DATA_ONLINE_37_STUD... | Programming Exercise.R | fourth_dataframe

Filter

| | Student_Number | Gender | Age | Favorite_Subject | Favorite_Color | Height | Weight | General_Mathematics | Statistics_and_Probability | Earth_Science | Media_and_Information_Literacy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 2020-10965-MN-0 | Female | 19 | Math | Green | 152 | 48 | 95 | 94 | 91 | 93 |

Showing 1 to 1 of 1 entries, 11 total columns

Console | Terminal | Jobs

~/ACAD College/

```
> View(fourth_dataframe)
> fourth_dataframe
    Student_Number Gender Age Favorite_Subject Favorite_Color Height Weight General_Mathematics Statistics_and_Probability Earth_Science
21 2020-10965-MN-0 Female  19            Math          Green    152     48                  95                         94            91
   Media_and_Information_Literacy
21                             93
>
```

**2.4 All female who like Math subject and color green.**

ASSESSMENT_DATA_ONLINE_37_STUD... | Programming Exercise.R | fifth_dataframe

Filter

| Student_Number | Gender | Age | Favorite_Subject | Favorite_Color | Height | Weight | General_Mathematics | Statistics_and_Probability | Earth_Science | Media_and_Information_Literacy |
|---|---|---|---|---|---|---|---|---|---|---|
| No data available in table | | | | | | | | | | |

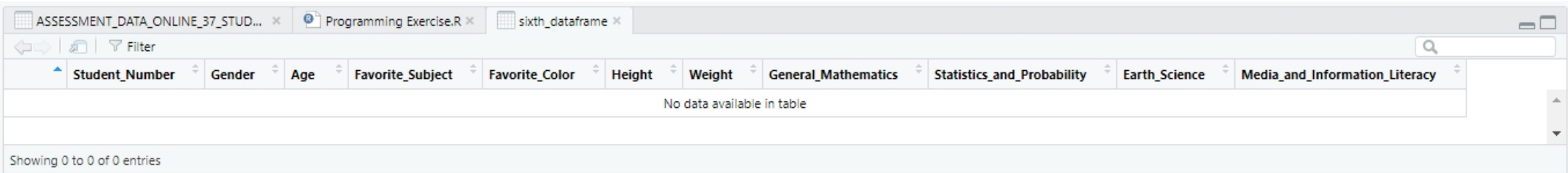
Showing 0 to 0 of 0 entries

Console | Terminal | Jobs

~/ACAD College/

```
> View(fifth_dataframe)
> fifth_dataframe
 [1] Student_Number                Gender                        Age                           Favorite_Subject              Favorite_Color
 [6] Height                        Weight                        General_Mathematics           Statistics_and_Probability    Earth_Science
[11] Media_and_Information_Literacy
<0 rows> (or 0-length row.names)
> |
```

**2.5 All students who like Math and the grade in Gen Math and Statistics and Probability is greater than 95.**




**2.6 All students who like Science and the grade in Earth Science is greater than 95.**

ASSESSMENT_DATA_ONLINE_37_STUD... | Programming Exercise.R | seventh_dataframe

Filter

| | Student_Number | Gender | Age | Favorite_Subject | Favorite_Color | Height | Weight | General_Mathematics | Statistics_and_Probability | Earth_Science | Media_and_Information_Literacy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 2020-00850-MN-0 | Male | 19 | English | Red | 175.26 | 47 | 0 | 0 | 0 | 96 |

Showing 1 to 1 of 1 entries, 11 total columns

Console | Terminal | Jobs

~/ACAD College/

```
> View(seventh_dataframe)
> seventh_dataframe
   Student_Number Gender Age Favorite_Subject Favorite_Color Height Weight General_Mathematics Statistics_and_Probability Earth_Science
3 2020-00850-MN-0   Male  19          English           Red 175.26     47                   0                         0             0
  Media_and_Information_Literacy
3                             96
> |
```

**2.7 All students who like English and the grade in Media and Information Literacy is greater than 95.**

ASSESSMENT_DATA_ONLINE_37_STUD... | Programming Exercise.R* | the_matrix

Filter

| | A | B | C | D | E |
|---|---|---|---|---|---|
| Red | 1 | 5 | 9 | 13 | 17 |
| Blue | 2 | 6 | 10 | 14 | 18 |
| Yellow | 3 | 7 | 11 | 15 | 19 |
| Green | 4 | 8 | 12 | 16 | 20 |

Showing 1 to 4 of 4 entries, 5 total columns

Console | Terminal | Jobs

~/ACAD College/

```
> #Matrix
> m_value <- 1:20
> row_name <- c("Red","Blue","Yellow","Green")
> col_name <- c("A","B","C","D","E")
> the_matrix <- matrix(m_value, nrow=4, ncol=5, byrow=FALSE, dimnames = list(row_name,col_name))
> View(the_matrix)
> the_matrix
       A B  C  D  E
Red    1 5  9 13 17
Blue   2 6 10 14 18
Yellow 3 7 11 15 19
Green  4 8 12 16 20
>
```

**3. Create a matrix with values 1 - 20 by column,with row names - ”Red”, ”Blue”,”Yellow” and ”Green”, and column names - ”A”, ”B”, ”C”, ”D”, and ”E”.**

Console | Terminal | Jobs

~/ACAD College/

```
> the_matrix
       A B  C  D  E
Red    1 5  9 13 17
Blue   2 6 10 14 18
Yellow 3 7 11 15 19
Green  4 8 12 16 20
> #Extracting column A, C, D
> the_matrix[,c(1,3,4)]
       A  C  D
Red    1  9 13
Blue   2 10 14
Yellow 3 11 15
Green  4 12 16
> #Extracting row Blue and yellow
> the_matrix[c(2,3),]
       A B  C  D  E
Blue   2 6 10 14 18
Yellow 3 7 11 15 19
>
```

**4. Extract the columns for ”A”, ”C”, and ”D”.**

**5. Extract the rows for ”Blue” and ”Yellow”.**

Console | Terminal | Jobs

~/ACAD College/

```
> #list
> listahan <- list(a=seq(1,20, length.out=40),b = factor(c("Rex", "BTS", "Cavetown" , "The 1975", "Sud")))
> listahan
$a
 [1]  1.000000  1.487179  1.974359  2.461538  2.948718  3.435897  3.923077  4.410256  4.897436  5.384615  5.871795  6.358974  6.846154  7.333333  7.820513
[16]  8.307692  8.794872  9.282051  9.769231 10.256410 10.743590 11.230769 11.717949 12.205128 12.692308 13.179487 13.666667 14.153846 14.641026 15.128205
[31] 15.615385 16.102564 16.589744 17.076923 17.564103 18.051282 18.538462 19.025641 19.512821 20.000000

$b
[1] Rex      BTS      Cavetown The 1975 Sud
Levels: BTS Cavetown Rex Sud The 1975

> |
```

**6. Create a list with a sequence of numbers with 40 elements between 1-20 inclusive, and a factor of your 5**