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

In [2]:
```
df=pd.read_csv("17_student_marks.csv")
df
```

Out[2]:

| | Student_ID | Test_1 | Test_2 | Test_3 | Test_4 | Test_5 | Test_6 | Test_7 | Test_8 | Test_9 | Test_10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 22000 | 78 | 87 | 91 | 91 | 88 | 98 | 94 | 100 | 100 | 100 |
| **1** | 22001 | 79 | 71 | 81 | 72 | 73 | 68 | 59 | 69 | 59 | 60 |
| **2** | 22002 | 66 | 65 | 70 | 74 | 78 | 86 | 87 | 96 | 88 | 82 |
| **3** | 22003 | 60 | 58 | 54 | 61 | 54 | 57 | 64 | 62 | 72 | 63 |
| **4** | 22004 | 99 | 95 | 96 | 93 | 97 | 89 | 92 | 98 | 91 | 98 |
| **5** | 22005 | 41 | 36 | 35 | 28 | 35 | 36 | 27 | 26 | 19 | 22 |
| **6** | 22006 | 47 | 50 | 47 | 57 | 62 | 64 | 71 | 75 | 85 | 87 |
| **7** | 22007 | 84 | 74 | 70 | 68 | 58 | 59 | 56 | 56 | 64 | 70 |
| **8** | 22008 | 74 | 64 | 58 | 57 | 53 | 51 | 47 | 45 | 42 | 43 |
| **9** | 22009 | 87 | 81 | 73 | 74 | 71 | 63 | 53 | 45 | 39 | 43 |
| **10** | 22010 | 40 | 34 | 37 | 33 | 31 | 35 | 39 | 38 | 40 | 48 |
| **11** | 22011 | 91 | 84 | 78 | 74 | 76 | 80 | 80 | 73 | 75 | 71 |
| **12** | 22012 | 81 | 83 | 93 | 88 | 89 | 90 | 99 | 99 | 95 | 85 |
| **13** | 22013 | 52 | 50 | 42 | 38 | 33 | 30 | 28 | 22 | 12 | 20 |
| **14** | 22014 | 63 | 67 | 65 | 74 | 80 | 86 | 95 | 96 | 92 | 83 |
| **15** | 22015 | 76 | 82 | 88 | 94 | 85 | 76 | 70 | 60 | 50 | 58 |
| **16** | 22016 | 83 | 78 | 71 | 71 | 77 | 72 | 66 | 75 | 66 | 61 |
| **17** | 22017 | 55 | 45 | 43 | 38 | 43 | 35 | 44 | 37 | 45 | 37 |
| **18** | 22018 | 71 | 67 | 76 | 74 | 64 | 61 | 57 | 64 | 61 | 51 |
| **19** | 22019 | 62 | 61 | 53 | 49 | 54 | 59 | 68 | 74 | 65 | 55 |
| **20** | 22020 | 44 | 38 | 36 | 34 | 26 | 34 | 39 | 44 | 36 | 45 |
| **21** | 22021 | 50 | 56 | 53 | 46 | 41 | 38 | 47 | 39 | 44 | 36 |
| **22** | 22022 | 57 | 48 | 40 | 45 | 43 | 36 | 26 | 19 | 9 | 12 |
| **23** | 22023 | 59 | 56 | 52 | 44 | 50 | 40 | 45 | 46 | 54 | 57 |
| **24** | 22024 | 84 | 92 | 89 | 80 | 90 | 80 | 84 | 74 | 68 | 73 |
| **25** | 22025 | 74 | 80 | 86 | 87 | 90 | 100 | 95 | 87 | 85 | 79 |
| **26** | 22026 | 92 | 84 | 74 | 83 | 93 | 83 | 75 | 82 | 81 | 73 |
| **27** | 22027 | 63 | 70 | 74 | 65 | 64 | 55 | 61 | 58 | 48 | 46 |
| **28** | 22028 | 78 | 77 | 69 | 76 | 78 | 74 | 67 | 69 | 78 | 68 |
| **29** | 22029 | 55 | 58 | 59 | 67 | 71 | 62 | 53 | 61 | 67 | 76 |
| **30** | 22030 | 54 | 54 | 48 | 38 | 35 | 45 | 46 | 47 | 41 | 37 |
| **31** | 22031 | 84 | 93 | 97 | 89 | 86 | 95 | 100 | 100 | 100 | 99 |
| **32** | 22032 | 95 | 100 | 94 | 100 | 98 | 99 | 100 | 90 | 80 | 84 |
| **33** | 22033 | 64 | 61 | 63 | 73 | 63 | 68 | 64 | 58 | 50 | 51 |
| **34** | 22034 | 76 | 79 | 73 | 77 | 83 | 86 | 95 | 89 | 90 | 95 |
| **35** | 22035 | 78 | 71 | 61 | 55 | 54 | 48 | 41 | 32 | 41 | 40 |

| | Student_ID | Test_1 | Test_2 | Test_3 | Test_4 | Test_5 | Test_6 | Test_7 | Test_8 | Test_9 | Test_10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **36** | 22036 | 95 | 89 | 91 | 84 | 89 | 94 | 85 | 91 | 100 | 100 |
| **37** | 22037 | 99 | 89 | 79 | 87 | 87 | 81 | 82 | 74 | 64 | 54 |
| **38** | 22038 | 82 | 83 | 85 | 86 | 89 | 80 | 88 | 95 | 87 | 93 |
| **39** | 22039 | 65 | 56 | 64 | 62 | 58 | 51 | 61 | 68 | 70 | 70 |
| **40** | 22040 | 100 | 93 | 92 | 86 | 84 | 76 | 82 | 74 | 79 | 72 |
| **41** | 22041 | 78 | 72 | 73 | 79 | 81 | 73 | 71 | 77 | 83 | 92 |
| **42** | 22042 | 98 | 100 | 100 | 93 | 94 | 92 | 100 | 100 | 98 | 94 |
| **43** | 22043 | 58 | 62 | 67 | 77 | 71 | 63 | 64 | 73 | 83 | 76 |
| **44** | 22044 | 96 | 92 | 94 | 100 | 99 | 95 | 98 | 92 | 84 | 84 |
| **45** | 22045 | 86 | 87 | 85 | 84 | 85 | 91 | 86 | 82 | 85 | 87 |
| **46** | 22046 | 48 | 55 | 46 | 40 | 34 | 29 | 37 | 34 | 39 | 41 |
| **47** | 22047 | 56 | 52 | 54 | 47 | 40 | 35 | 43 | 44 | 40 | 39 |
| **48** | 22048 | 42 | 44 | 46 | 53 | 62 | 59 | 57 | 53 | 43 | 35 |
| **49** | 22049 | 64 | 54 | 49 | 59 | 54 | 55 | 57 | 59 | 63 | 73 |
| **50** | 22050 | 50 | 44 | 37 | 29 | 37 | 46 | 53 | 57 | 55 | 61 |
| **51** | 22051 | 70 | 60 | 70 | 62 | 67 | 67 | 68 | 67 | 72 | 69 |
| **52** | 22052 | 63 | 73 | 70 | 63 | 60 | 67 | 61 | 59 | 52 | 58 |
| **53** | 22053 | 92 | 100 | 100 | 100 | 100 | 100 | 92 | 87 | 94 | 100 |
| **54** | 22054 | 64 | 55 | 54 | 61 | 63 | 57 | 47 | 37 | 44 | 48 |
| **55** | 22055 | 60 | 66 | 68 | 58 | 49 | 47 | 39 | 29 | 39 | 44 |

In [3]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 56 entries, 0 to 55
Data columns (total 13 columns):
 #   Column      Non-Null Count  Dtype
---  ------      --------------  -----
 0   Student_ID  56 non-null     int64
 1   Test_1      56 non-null     int64
 2   Test_2      56 non-null     int64
 3   Test_3      56 non-null     int64
 4   Test_4      56 non-null     int64
 5   Test_5      56 non-null     int64
 6   Test_6      56 non-null     int64
 7   Test_7      56 non-null     int64
 8   Test_8      56 non-null     int64
 9   Test_9      56 non-null     int64
 10  Test_10     56 non-null     int64
 11  Test_11     56 non-null     int64
 12  Test_12     56 non-null     int64
dtypes: int64(13)
memory usage: 5.8 KB
```

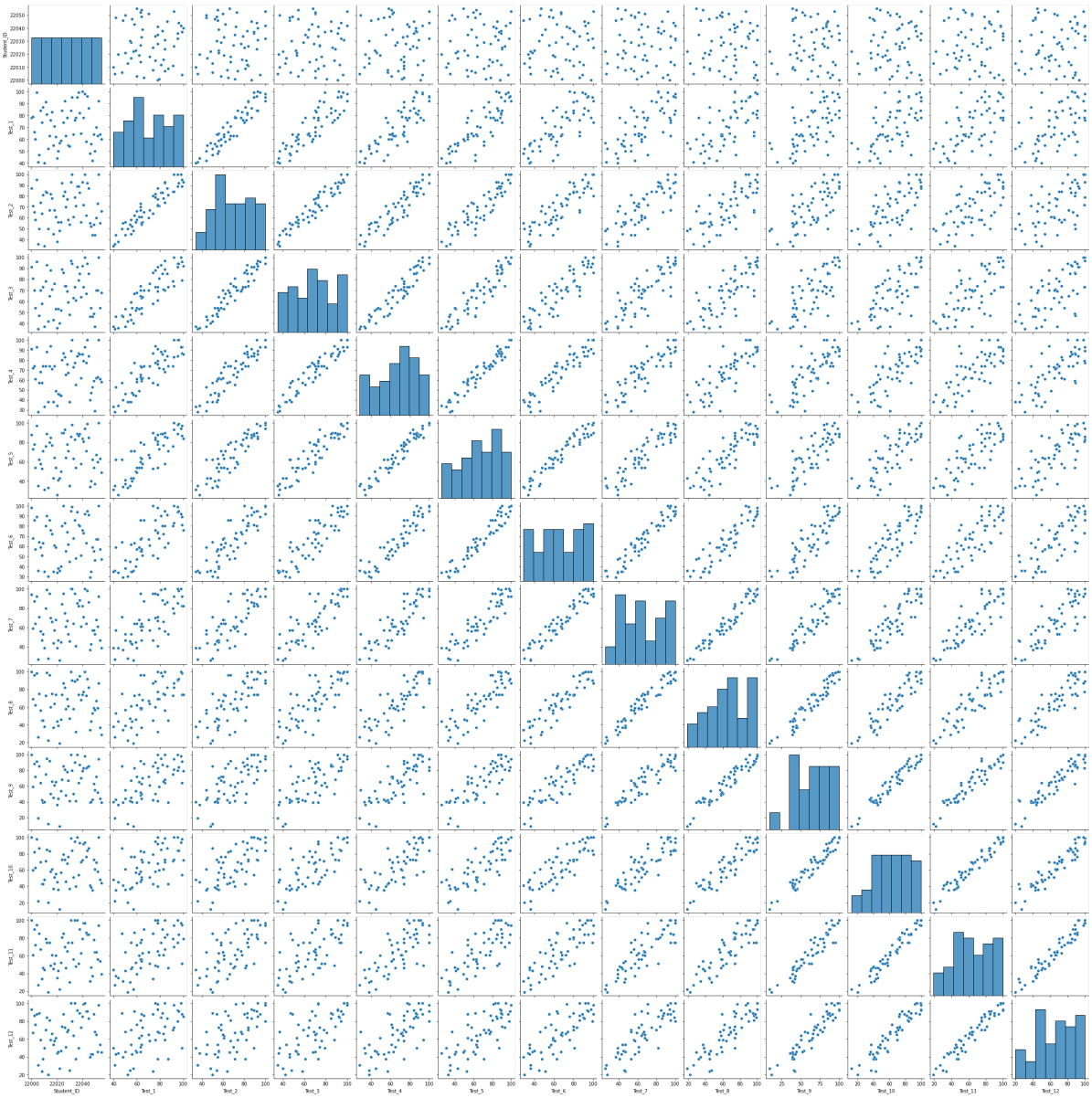
In [4]:
```
df.describe()
```

Out[4]:

| | Student_ID | Test_1 | Test_2 | Test_3 | Test_4 | Test_5 | Test_6 | |
|---|---|---|---|---|---|---|---|---|
| **count** | 56.000000 | 56.000000 | 56.000000 | 56.000000 | 56.000000 | 56.000000 | 56.000000 | 5 |
| **mean** | 22027.500000 | 70.750000 | 69.196429 | 68.089286 | 67.446429 | 67.303571 | 66.000000 | 6 |
| **std** | 16.309506 | 17.009356 | 17.712266 | 18.838333 | 19.807179 | 20.746890 | 21.054043 | 2 |
| **min** | 22000.000000 | 40.000000 | 34.000000 | 35.000000 | 28.000000 | 26.000000 | 29.000000 | 2 |
| **25%** | 22013.750000 | 57.750000 | 55.750000 | 53.000000 | 54.500000 | 53.750000 | 50.250000 | 4 |
| **50%** | 22027.500000 | 70.500000 | 68.500000 | 70.000000 | 71.500000 | 69.000000 | 65.500000 | 6 |
| **75%** | 22041.250000 | 84.000000 | 83.250000 | 85.000000 | 84.000000 | 85.250000 | 83.750000 | 8 |
| **max** | 22055.000000 | 100.000000 | 100.000000 | 100.000000 | 100.000000 | 100.000000 | 100.000000 | 10 |

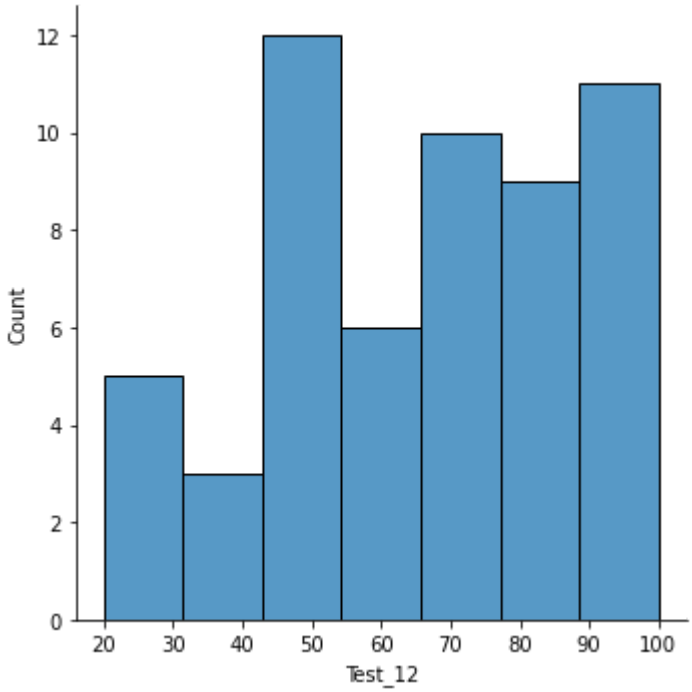
In [5]:
```
sns.pairplot(df)
```

Out[5]:
```
<seaborn.axisgrid.PairGrid at 0x20815f0a9d0>
```



In [6]:
```
sns.displot(df['Test_12'])
```

Out[6]:
```
<seaborn.axisgrid.FacetGrid at 0x2081bf16730>
```



In [7]:
```
df1=df.drop(['Student_ID'],axis=1)
df1
```

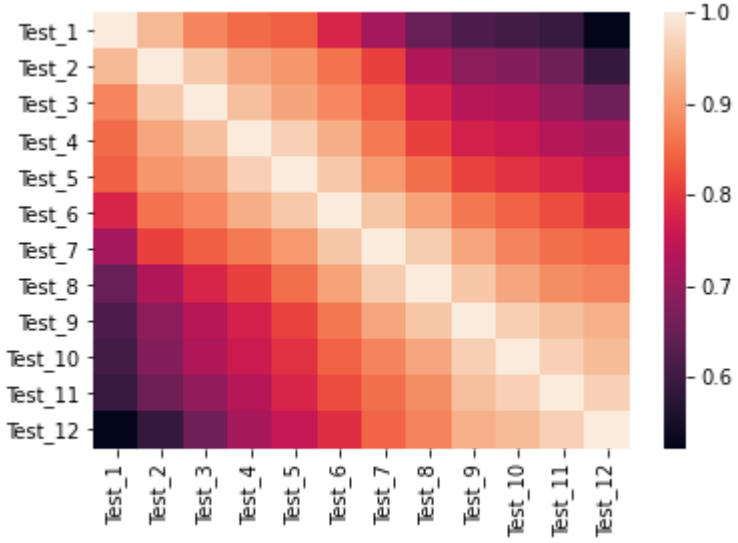
Out[7]:

| | Test_1 | Test_2 | Test_3 | Test_4 | Test_5 | Test_6 | Test_7 | Test_8 | Test_9 | Test_10 | Test_11 | Tes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 78 | 87 | 91 | 91 | 88 | 98 | 94 | 100 | 100 | 100 | 100 | |
| **1** | 79 | 71 | 81 | 72 | 73 | 68 | 59 | 69 | 59 | 60 | 61 | |
| **2** | 66 | 65 | 70 | 74 | 78 | 86 | 87 | 96 | 88 | 82 | 90 | |
| **3** | 60 | 58 | 54 | 61 | 54 | 57 | 64 | 62 | 72 | 63 | 72 | |
| **4** | 99 | 95 | 96 | 93 | 97 | 89 | 92 | 98 | 91 | 98 | 95 | |
| **5** | 41 | 36 | 35 | 28 | 35 | 36 | 27 | 26 | 19 | 22 | 27 | |
| **6** | 47 | 50 | 47 | 57 | 62 | 64 | 71 | 75 | 85 | 87 | 85 | |
| **7** | 84 | 74 | 70 | 68 | 58 | 59 | 56 | 56 | 64 | 70 | 67 | |
| **8** | 74 | 64 | 58 | 57 | 53 | 51 | 47 | 45 | 42 | 43 | 34 | |
| **9** | 87 | 81 | 73 | 74 | 71 | 63 | 53 | 45 | 39 | 43 | 46 | |
| **10** | 40 | 34 | 37 | 33 | 31 | 35 | 39 | 38 | 40 | 48 | 44 | |
| **11** | 91 | 84 | 78 | 74 | 76 | 80 | 80 | 73 | 75 | 71 | 79 | |
| **12** | 81 | 83 | 93 | 88 | 89 | 90 | 99 | 99 | 95 | 85 | 75 | |
| **13** | 52 | 50 | 42 | 38 | 33 | 30 | 28 | 22 | 12 | 20 | 19 | |
| **14** | 63 | 67 | 65 | 74 | 80 | 86 | 95 | 96 | 92 | 83 | 75 | |
| **15** | 76 | 82 | 88 | 94 | 85 | 76 | 70 | 60 | 50 | 58 | 49 | |
| **16** | 83 | 78 | 71 | 71 | 77 | 72 | 66 | 75 | 66 | 61 | 61 | |
| **17** | 55 | 45 | 43 | 38 | 43 | 35 | 44 | 37 | 45 | 37 | 45 | |
| **18** | 71 | 67 | 76 | 74 | 64 | 61 | 57 | 64 | 61 | 51 | 51 | |
| **19** | 62 | 61 | 53 | 49 | 54 | 59 | 68 | 74 | 65 | 55 | 60 | |
| **20** | 44 | 38 | 36 | 34 | 26 | 34 | 39 | 44 | 36 | 45 | 35 | |
| **21** | 50 | 56 | 53 | 46 | 41 | 38 | 47 | 39 | 44 | 36 | 43 | |
| **22** | 57 | 48 | 40 | 45 | 43 | 36 | 26 | 19 | 9 | 12 | 22 | |
| **23** | 59 | 56 | 52 | 44 | 50 | 40 | 45 | 46 | 54 | 57 | 52 | |
| **24** | 84 | 92 | 89 | 80 | 90 | 80 | 84 | 74 | 68 | 73 | 81 | |
| **25** | 74 | 80 | 86 | 87 | 90 | 100 | 95 | 87 | 85 | 79 | 85 | |
| **26** | 92 | 84 | 74 | 83 | 93 | 83 | 75 | 82 | 81 | 73 | 70 | |
| **27** | 63 | 70 | 74 | 65 | 64 | 55 | 61 | 58 | 48 | 46 | 46 | |
| **28** | 78 | 77 | 69 | 76 | 78 | 74 | 67 | 69 | 78 | 68 | 65 | |
| **29** | 55 | 58 | 59 | 67 | 71 | 62 | 53 | 61 | 67 | 76 | 75 | |
| **30** | 54 | 54 | 48 | 38 | 35 | 45 | 46 | 47 | 41 | 37 | 30 | |
| **31** | 84 | 93 | 97 | 89 | 86 | 95 | 100 | 100 | 100 | 99 | 100 | |
| **32** | 95 | 100 | 94 | 100 | 98 | 99 | 100 | 90 | 80 | 84 | 75 | |
| **33** | 64 | 61 | 63 | 73 | 63 | 68 | 64 | 58 | 50 | 51 | 56 | |
| **34** | 76 | 79 | 73 | 77 | 83 | 86 | 95 | 89 | 90 | 95 | 100 | |
| **35** | 78 | 71 | 61 | 55 | 54 | 48 | 41 | 32 | 41 | 40 | 48 | |

| | Test_1 | Test_2 | Test_3 | Test_4 | Test_5 | Test_6 | Test_7 | Test_8 | Test_9 | Test_10 | Test_11 | Tes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **36** | 95 | 89 | 91 | 84 | 89 | 94 | 85 | 91 | 100 | 100 | 100 | |
| **37** | 99 | 89 | 79 | 87 | 87 | 81 | 82 | 74 | 64 | 54 | 51 | |
| **38** | 82 | 83 | 85 | 86 | 89 | 80 | 88 | 95 | 87 | 93 | 90 | |
| **39** | 65 | 56 | 64 | 62 | 58 | 51 | 61 | 68 | 70 | 70 | 63 | |
| **40** | 100 | 93 | 92 | 86 | 84 | 76 | 82 | 74 | 79 | 72 | 79 | |
| **41** | 78 | 72 | 73 | 79 | 81 | 73 | 71 | 77 | 83 | 92 | 97 | |
| **42** | 98 | 100 | 100 | 93 | 94 | 92 | 100 | 100 | 98 | 94 | 97 | |
| **43** | 58 | 62 | 67 | 77 | 71 | 63 | 64 | 73 | 83 | 76 | 86 | |
| **44** | 96 | 92 | 94 | 100 | 99 | 95 | 98 | 92 | 84 | 84 | 84 | |
| **45** | 86 | 87 | 85 | 84 | 85 | 91 | 86 | 82 | 85 | 87 | 84 | |
| **46** | 48 | 55 | 46 | 40 | 34 | 29 | 37 | 34 | 39 | 41 | 31 | |
| **47** | 56 | 52 | 54 | 47 | 40 | 35 | 43 | 44 | 40 | 39 | 47 | |
| **48** | 42 | 44 | 46 | 53 | 62 | 59 | 57 | 53 | 43 | 35 | 37 | |
| **49** | 64 | 54 | 49 | 59 | 54 | 55 | 57 | 59 | 63 | 73 | 78 | |
| **50** | 50 | 44 | 37 | 29 | 37 | 46 | 53 | 57 | 55 | 61 | 64 | |
| **51** | 70 | 60 | 70 | 62 | 67 | 67 | 68 | 67 | 72 | 69 | 64 | |
| **52** | 63 | 73 | 70 | 63 | 60 | 67 | 61 | 59 | 52 | 58 | 56 | |
| **53** | 92 | 100 | 100 | 100 | 100 | 100 | 92 | 87 | 94 | 100 | 94 | |
| **54** | 64 | 55 | 54 | 61 | 63 | 57 | 47 | 37 | 44 | 48 | 54 | |
| **55** | 60 | 66 | 68 | 58 | 49 | 47 | 39 | 29 | 39 | 44 | 39 | |

In [8]:
```
sns.heatmap(df1.corr())
```

Out[8]: <AxesSubplot:>



In [9]:
```
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
```

In [10]:
```
y=df['Test_12']
x=df1.drop(['Test_12'],axis=1)
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.3)
print(x_train)
```

| | Test_1 | Test_2 | Test_3 | Test_4 | Test_5 | Test_6 | Test_7 | Test_8 | Test_9 | Test_10 | Test_11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 71 | 67 | 76 | 74 | 64 | 61 | 57 | 64 | 61 | 51 | 51 |
| 29 | 55 | 58 | 59 | 67 | 71 | 62 | 53 | 61 | 67 | 76 | 75 |
| 7 | 84 | 74 | 70 | 68 | 58 | 59 | 56 | 56 | 64 | 70 | 67 |
| 1 | 79 | 71 | 81 | 72 | 73 | 68 | 59 | 69 | 59 | 60 | 61 |
| 39 | 65 | 56 | 64 | 62 | 58 | 51 | 61 | 68 | 70 | 70 | 63 |
| 34 | 76 | 79 | 73 | 77 | 83 | 86 | 95 | 89 | 90 | 95 | 100 |
| 41 | 78 | 72 | 73 | 79 | 81 | 73 | 71 | 77 | 83 | 92 | 97 |
| 15 | 76 | 82 | 88 | 94 | 85 | 76 | 70 | 60 | 50 | 58 | 49 |
| 16 | 83 | 78 | 71 | 71 | 77 | 72 | 66 | 75 | 66 | 61 | 61 |
| 19 | 62 | 61 | 53 | 49 | 54 | 59 | 68 | 74 | 65 | 55 | 60 |
| 21 | 50 | 56 | 53 | 46 | 41 | 38 | 47 | 39 | 44 | 36 | 43 |
| 10 | 40 | 34 | 37 | 33 | 31 | 35 | 39 | 38 | 40 | 48 | 44 |
| 49 | 64 | 54 | 49 | 59 | 54 | 55 | 57 | 59 | 63 | 73 | 78 |
| 26 | 92 | 84 | 74 | 83 | 93 | 83 | 75 | 82 | 81 | 73 | 70 |
| 53 | 92 | 100 | 100 | 100 | 100 | 100 | 92 | 87 | 94 | 100 | 94 |
| 42 | 98 | 100 | 100 | 93 | 94 | 92 | 100 | 100 | 98 | | |
| 48 | 42 | 44 | 46 | 53 | 62 | 59 | 57 | 53 | 43 | | |
| 0 | 78 | 87 | 91 | 91 | 88 | 98 | 94 | 100 | 100 | | |
| 32 | 95 | 100 | 94 | 100 | 98 | 99 | 100 | 90 | 80 | | |
| 17 | 55 | 45 | 43 | 38 | 43 | 35 | 44 | 37 | 45 | | |
| 47 | 56 | 52 | 54 | 47 | 40 | 35 | 43 | 44 | 40 | | |
| 52 | 63 | 73 | 70 | 63 | 60 | 67 | 61 | 59 | 52 | | |
| 38 | 82 | 83 | 85 | 86 | 89 | 80 | 88 | 95 | 87 | | |
| 37 | 99 | 89 | 79 | 87 | 87 | 81 | 82 | 74 | 64 | | |
| 55 | 60 | 66 | 68 | 58 | 49 | 47 | 39 | 29 | 39 | | |
| 54 | 64 | 55 | 54 | 61 | 63 | 57 | 47 | 37 | 44 | | |
| 2 | 66 | 65 | 70 | 74 | 78 | 86 | 87 | 96 | 88 | | |
| 51 | 70 | 60 | 70 | 62 | 67 | 67 | 68 | 67 | 72 | | |
| 23 | 59 | 56 | 52 | 44 | 50 | 40 | 45 | 46 | 54 | | |
| 46 | 48 | 55 | 46 | 40 | 34 | 29 | 37 | 34 | 39 | | |
| 40 | 100 | 93 | 92 | 86 | 84 | 76 | 82 | 74 | 79 | | |
| 25 | 74 | 80 | 86 | 87 | 90 | 100 | 95 | 87 | 85 | | |
| 28 | 78 | 77 | 69 | 76 | 78 | 74 | 67 | 69 | 78 | | |
| 13 | 52 | 50 | 42 | 38 | 33 | 30 | 28 | 22 | 12 | | |
| 22 | 57 | 48 | 40 | 45 | 43 | 36 | 26 | 19 | 9 | | |
| 6 | 47 | 50 | 47 | 57 | 62 | 64 | 71 | 75 | 85 | | |
| 30 | 54 | 54 | 48 | 38 | 35 | 45 | 46 | 47 | 41 | | |
| 36 | 95 | 89 | 91 | 84 | 89 | 94 | 85 | 91 | 100 | | |
| 9 | 87 | 81 | 73 | 74 | 71 | 63 | 53 | 45 | 39 | | |

```
42        94        97
48        35        37
0        100       100
32        84        75
17        37        45
47        39        47
52        58        56
38        93        90
37        54        51
55        44        39
54        48        54
2         82        90
51        69        64
23        57        52
46        41        31
40        72        79
25        79        85
28        68        65
13        20        19
22        12        22
6         87        85
30        37        30
36       100       100
9         43        46
```

In [11]:
```
model=LinearRegression()
model.fit(x_train,y_train)
model.intercept_
```

Out[11]:
```
5.6040087055494325
```

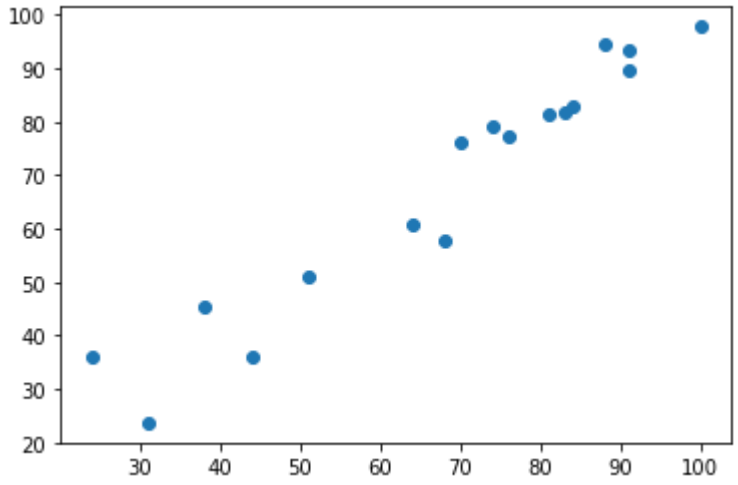
In [12]:
```
coeff=pd.DataFrame(model.coef_,x.columns,columns=["Coefficient"])
coeff
```

Out[12]:

| | Coefficient |
|---|---|
| **Test_1** | 0.004721 |
| **Test_2** | -0.364389 |
| **Test_3** | 0.006931 |
| **Test_4** | 0.431207 |
| **Test_5** | 0.141337 |
| **Test_6** | -0.484374 |
| **Test_7** | 0.406537 |
| **Test_8** | -0.194767 |
| **Test_9** | 0.214479 |
| **Test_10** | -0.028789 |
| **Test_11** | 0.806927 |

In [13]:
```
prediction=model.predict(x_test)
plt.scatter(y_test,prediction)
```

Out[13]:
```
<matplotlib.collections.PathCollection at 0x2081fe5a130>
```




In [14]:
```
model.score(x_test,y_test)
```

Out[14]:
```
0.933328456603787
```

In [15]:
```
from sklearn.linear_model import Ridge,Lasso
```

In [16]:
```
rr = Ridge(alpha=10)
rr.fit(x_train,y_train)
```

Out[16]:
```
Ridge(alpha=10)
```

In [17]:
```
rr.score(x_test,y_test)
```

Out[17]:
```
0.9339458759829211
```

In [18]:
```
la = Lasso(alpha=10)
la.fit(x_train,y_train)
```

Out[18]:
```
Lasso(alpha=10)
```

In [19]:
```
la.score(x_test,y_test)
```

Out[19]:
```
0.9118038939366082
```

In [20]:
```
from sklearn.linear_model import ElasticNet
en=ElasticNet()
en.fit(x_train,y_train)
print(en.coef_)
print(en.intercept_)
print(en.predict(x_test))
print(en.score(x_test,y_test))
from sklearn import metrics
print("Mean Absolute Error:",metrics.mean_absolute_error(y_test,prediction))
print("Mean Squared Error:",metrics.mean_squared_error(y_test,prediction))
print("Root Mean Squared Error:",np.sqrt(metrics.mean_squared_error(y_test,pred
```

```
[-0.         -0.31793381 -0.          0.38346955  0.1215728  -0.41540918
  0.33071772 -0.13598643  0.17881554  0.          0.79244638]
5.745682458395585
[45.46522246 92.25283604 50.67123882 60.3527555  76.24940631 81.88399024
 97.89733878 58.59481916 81.06949362 88.90014936 78.94706054 75.96762608
 94.67976456 82.23500315 24.5248093  36.39094685 36.8267143 ]
0.9370265493867106
Mean Absolute Error: 4.473020062459557
Mean Squared Error: 32.636758630665206
Root Mean Squared Error: 5.7128590592334065
```