Assignment Machine learning.

1. Least Square Error
2. Linear regression is sensitive to outliers
3. Negative
4. Both of them
5. none of these
6. Descriptive model
7. Regularization
8. SMOTE
9. Sensitivity and precision
10. True
11. Apply PCA to project high dimensional data
12. A,b,c.
13. Technique used to calibrate machine learning models in order to minimize the adjusted loss function and prevent overfitting and underfitting.
14. There are 3 of them, Ridge regression, lasso and dropout
15. Error Is difference between actual value and predicted value.

Python Worksheet.

1. %
2. 0
3. 24
4. 2
5. 6
6. the finally block will be executed no matter if the try block raises an error or not
7. It is used to raise an exception.
8. in defining a generator
9. None of the above
10. Yield, raie,
11. num = 5
    factorial = 1
    if num < 0:
      print("Sorry, factorial does not exist for negative numbers")
    elif num == 0:
      print("The factorial of 0 is 1")
    else:
      for i in range(1,num + 1):
        factorial = factorial*i
      print("The factorial of",num,"is",factorial)
    12.

```
n = 5


if n > 1:
   for i in range(2, int(n/2)+1):
      if (n % i) == 0:
      print(num, "is not a prime number")
      break
else:
   print(n, "is a prime number")
else:
   print(n, "is not a prime number")
```

o/p n5 is a prime number

12.

In [20]:
```
from math import sqrt
print("Input lengths of shorter triangle sides:")
a = float(input("a: "))
b = float(input("b: "))
c = sqrt(a**2 + b**2)
print("The length of the hypotenuse is:", c )
```

```
Input lengths of shorter triangle sides:
a: 3
b: 4
The length of the hypotenuse is: 5.0
```

13.

In [22]:
```
test_str = "sharadgudekar"
all_freq = {}

for i in test_str:
    if i in all_freq:
        all_freq[i] += 1
    else:
        all_freq[i] = 1
        print("Count of all characters in sharadgudekar is :\n "
      + str(all_freq))
```

```
Count of all characters in sharadgudekar is :
 {'s': 1}
Count of all characters in sharadgudekar is :
 {'s': 1, 'h': 1}
Count of all characters in sharadgudekar is :
 {'s': 1, 'h': 1, 'a': 1}
Count of all characters in sharadgudekar is :
 {'s': 1, 'h': 1, 'a': 1, 'r': 1}
Count of all characters in sharadgudekar is :
 {'s': 1, 'h': 1, 'a': 2, 'r': 1, 'd': 1}
Count of all characters in sharadgudekar is :
 {'s': 1, 'h': 1, 'a': 2, 'r': 1, 'd': 1, 'g': 1}
Count of all characters in sharadgudekar is :
 {'s': 1, 'h': 1, 'a': 2, 'r': 1, 'd': 1, 'g': 1, 'u': 1}
Count of all characters in sharadgudekar is :
 {'s': 1, 'h': 1, 'a': 2, 'r': 1, 'd': 2, 'g': 1, 'u': 1, 'e': 1}
Count of all characters in sharadgudekar is :
 {'s': 1, 'h': 1, 'a': 2, 'r': 1, 'd': 2, 'g': 1, 'u': 1, 'e': 1, 'k': 1}
```

STATISTICS WORKSHEET-1

1. True
2. Central Limit Theorem
3. Modelling bounded count data
4. All of the mentioned
5. Poisson
6. False
7. Hypothesis
8. 0
9. Outliers cannot conform to the regression relationship
10. Normal distribution is where data is symmetrically distributed with no skew. We can also call it as a bell curve distribution.
11. We can ignore the missing data, there are hot deck imputation, cold deck imputation, mean imputation technique.
12. A/B testing also known as split testing, refers to a randomized experimentation process wherein two or more versions of a variable (web page, page element, etc.) are shown to different segments of website visitors at the same time to determine which version leaves the maximum impact and drives business metrics.
13. No mean imputation of missing data is not acceptable practice.
14. linear regression is a regression model that estimates the relation between one independent variable and one dependent variable.
15. Descriptive statistics and inferential statistics.