MACHINE LEARNING

GITHUB LINK: https://github.com/sparsha21/sparsha21/blob/main/Ml%20Assignment%201.py

RECORDING VIDEO LINK:
https://drive.google.com/file/d/1P77BHnUQQSnUr365qcKREOtjBGNbVhgM/view?usp=sharing

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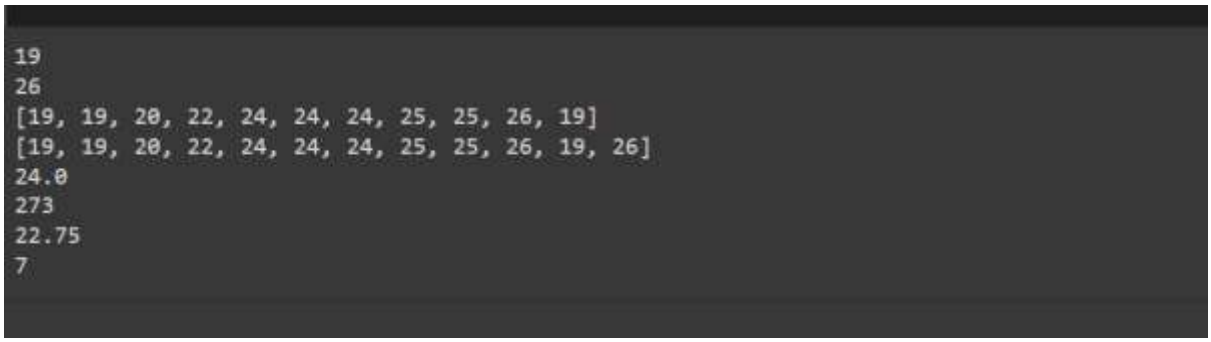
Q1.Sorting the list , finding the min and max age ,Median, Mean and range of the ages.



Q2.Create a dictionary as Dog and insert attributes then create student dictionary and add keys as given. Find length, values of skills and modify.

```
dog = dict()
dog["name"] = "BROWNIE"
dog["color"] = "BLACK"
dog["breed"] = "GREAT DANE"
dog["legs"] = "4"
dog["age"] = "9"
print(dog)

student = dict()
student["first_name"] = "SPARSHA"
student["last_name"] = "ADURI"
student["gender"] = "FEMALE"
student["age"] = "22"
student["hobbies"] = ["CRICKET" , "MUSIC"]
student["achievements"] = "STATE CHAMPION"
student["country"] = "INDIA"
student["city"] = "POPL"
student["ph no"] = "+91 9378763761"
print(student)
length1 = len(student)
print(length1)
print(student["hobbies"])
print(type(student["hobbies"]))
student["hobbies"].extend(["STATE CHAMPOIN"])
print(student["hobbies"])
print(student.keys())
print(student.values())
```

```
{'name': 'BROWNIE', 'color': 'BLACK', 'breed': 'GREAT DANE', 'legs': '4', 'age': '9'}
{'first_name': 'SPARSHA', 'last_name': 'ADURI', 'gender': 'FEMALE', 'age': '22', 'hobbies': ['CRICKET', 'MUSIC'], 'achievements': 'STATE CHAMPION', 'country': 'INDIA', 'city': 'POPL', 'ph no':
9
['CRICKET', 'MUSIC']
<class 'list'>
['CRICKET', 'MUSIC', 'STATE CHAMPOIN']
dict_keys(['first_name', 'last_name', 'gender', 'age', 'hobbies', 'achievements', 'country', 'city', 'ph no'])
dict_values(['SPARSHA', 'ADURI', 'FEMALE', '22', ['CRICKET', 'MUSIC', 'STATE CHAMPOIN'], 'STATE CHAMPION', 'INDIA', 'POPL', '+91 9378763761'])
```

Q3.Create tuple as sisters and brothers. Add those tuples to siblings and then modify.

```
brothers = ("SUJITH", "VARSHIK", "VAMSHI");
sisters = ("SATVIKA", "SRUTHI", "VANITHA");
siblings = sisters + brothers;
print(siblings);
length1 = (siblings);
print(length1);
family_members = siblings + ("VIKAS", "KAVYA");
print(family_members);
```

```
('SATVIKA', 'SRUTHI', 'VANITHA', 'SUJITH', 'VARSHIK', 'VAMSHI')
('SATVIKA', 'SRUTHI', 'VANITHA', 'SUJITH', 'VARSHIK', 'VAMSHI')
('SATVIKA', 'SRUTHI', 'VANITHA', 'SUJITH', 'VARSHIK', 'VAMSHI', 'VIKAS', 'KAVYA')
```

Q4.Find the length, Perform Join, intersection, disjoint, subset and then delete the sets.

```
it_companies = {'Facebook', 'Google', 'Microsoft', 'Apple', 'IBM', 'Oracle', 'Amazon'}
print(" length:",len(it_companies))
it_companies.update(['twitter'])
print(it_companies)
it_companies.remove("IBM")
print(it_companies)
it_companies.update({'Blueberry'})
print(it_companies)
A = {19, 22, 24, 20, 25, 26}
B = {19, 22, 20, 25, 26, 24, 28, 27}
X=A.union(B)
print(X)
Y=A.intersection(B)
print(Y)
print(A&B)
print(A.issubset(B))
print(A.isdisjoint(B))
print(A.symmetric_difference(B))
X.clear()
print(X)
age_list = [22, 19, 24, 25, 26, 24, 25, 24]
print("Age",len(age_list))
AGE_SET= set(age_list)
print("Age",AGE_SET)
print("Age",len(AGE_SET))
```

```
 length: 7
{'Google', 'twitter', 'IBM', 'Apple', 'Amazon', 'Oracle', 'Facebook', 'Microsoft'}
{'Google', 'twitter', 'Apple', 'Amazon', 'Oracle', 'Facebook', 'Microsoft'}
{'Google', 'twitter', 'Amazon', 'Oracle', 'Microsoft', 'Blueberry', 'Apple', 'Facebook'}
{19, 20, 22, 24, 25, 26, 27, 28}
{19, 20, 22, 24, 25, 26}
{19, 20, 22, 24, 25, 26}
True
False
{27, 28}
set()
Age 8
Age {19, 22, 24, 25, 26}
Age 5
```

Q5.Calculate area of circle, circumference of circle.

```
r = 30
pi = 3.14
area_of_circle = pi*r**2
res = 'The area of circle with {} is {}'.format(str(r), str(area_of_circle))
print(res)
circum_of_circle = 2*3.14*r
print("circumference of circle:",circum_of_circle)
user_input=float(input())
raaadius=20
area_of_circle=pi*raaadius**2
print(area_of_circle)
```

```
The area of circle with 30 is 2826.0
circumference of circle: 188.4
5
1256.0
```

Q6. Count unique words of the sentence.

```
sentence="I am a teacher and I love to inspire and teach people"
unique_letter=set(sentence.split())
print("no.of unique words are ",len(unique_letter))
```

```
no.of unique words are  10
```

Q7. Use tab escape

```
sequence="Name\tAge\tCountry\tCity\tASABNEH\t250\tFINLAND\tHELSINKI";
print(sequence);
```

```
Name    Age     Country City    ASABNEH 250     FINLAND HELSINKI
```

Q8.Find area of circle of r=10

```
radius = 10
area = 3.14 * radius ** 2
print("The area of a circle with a radius %s is %s meters square." %(radius,area))
```

```
The area of a circle with a radius 10 is 314.0 meters square.
```

Q9.Read the weights of N students in lbs and convert these weights of students into kilograms.

```
c=0.45
v=int(input("number of students"))
l1=[]
l2=[]
for i in range(v):
    l1.append(int(input("enter weight in lbs:"+str(i+1)+" ")))
    l2.append(round(l1[i]*0.453,2))
print("given weights in lbs:",l1)
print("converted weights in kgs:",l2)
```

```
number of students2
enter weight in lbs:1 100
enter weight in lbs:2 200
given weights in lbs: [100, 200]
converted weights in kgs: [45.3, 90.6]
```