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

In [2]:
```python
sharks_data=pd.read_csv("Shark_Tank.csv")
```

In [3]:
```python
sharks_data.head()
```

Out[3]:

	episode_number	startup_number	brand_name	description	deal_offered	startup_ask_amount_lakhs	startup_ask_percentage	startup_ask_valuation	deal_amount_lakhs	deal_equity	...	ghazal_inves
0	1	1	BluePine Industries	Frozen Momos	1	50.0	5.0	1000.00	75.0	16.00	...	
1	1	2	Booz scooters	Renting e-bike for mobility in private spaces	1	40.0	15.0	266.67	40.0	50.00	...	
2	1	3	Heart up my Sleeves	Detachable Sleeves	1	25.0	10.0	250.00	25.0	30.00	...	
3	2	4	Tagz Foods	Healthy Potato Chips	1	70.0	1.0	7000.00	70.0	2.75	...	
4	2	5	Head and Heart	Brain Development Course	0	50.0	5.0	1000.00	0.0	0.00	...	

5 rows × 32 columns

In [4]:
```python
sharks_data.tail()
```

Out[4]:

	episode_number	startup_number	brand_name	description	deal_offered	startup_ask_amount_lakhs	startup_ask_percentage	startup_ask_valuation	deal_amount_lakhs	deal_equity	...	ghazal_inv
116	35	117	Elcare India	Carenting for Elders	0	100.0	2.50	4000.0	0.0	0.0	...	
117	36	118	Sneakare	Shoe care and storage solutions	1	20.0	5.00	400.0	21.0	12.0	...	
118	36	119	French Crown	Clothing Industry	0	150.0	0.33	45000.0	0.0	0.0	...	
119	36	120	Store My Goods	Storage solutions	1	100.0	1.75	5714.0	100.0	4.0	...	
120	36	121	Devnagri	Translation platform	0	100.0	1.00	10000.0	0.0	0.0	...	

5 rows × 32 columns

In [5]:
```python
sharks_data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 121 entries, 0 to 120
Data columns (total 32 columns):
 #   Column                    Non-Null Count  Dtype  
---  ------                    --------------  -----  
 0   episode_number            121 non-null    int64  
 1   startup_number            121 non-null    int64  
 2   brand_name                121 non-null    object 
 3   description               121 non-null    object 
 4   deal_offered              121 non-null    int64  
 5   startup_ask_amount_lakhs  121 non-null    float64
 6   startup_ask_percentage    121 non-null    float64
 7   startup_ask_valuation     121 non-null    float64
 8   deal_amount_lakhs         121 non-null    float64
 9   deal_equity               121 non-null    float64
 10  deal_valuation            121 non-null    float64
 11  loan_element_present      121 non-null    int64  
 12  loan_amount               121 non-null    int64  
 13  rannvijay_present         121 non-null    int64  
 14  abish_present             121 non-null    int64  
 15  aman_present              121 non-null    int64  
 16  aman_invested             121 non-null    int64  
 17  anupam_present            121 non-null    int64  
 18  anupam_invested           121 non-null    int64  
 19  ashneer_present           121 non-null    int64  
 20  ashneer_invested          121 non-null    int64  
 21  ghazal_present            121 non-null    int64  
 22  ghazal_invested           121 non-null    int64  
 23  namita_present            121 non-null    int64  
 24  namita_invested           121 non-null    int64  
 25  peyush_present            121 non-null    int64  
 26  peyush_invested           121 non-null    int64  
 27  vineeta_present           121 non-null    int64  
 28  vineeta_invested          121 non-null    int64  
 29  sharks_offering           121 non-null    int64  
 30  amount_per_shark          121 non-null    float64
 31  equity_per_shark          121 non-null    float64
dtypes: float64(8), int64(22), object(2)
memory usage: 30.4+ KB
```

In [6]:
```python
sharks_data.shape
```

Out[6]:
```
(121, 32)
```

In [7]:
```python
sharks_data.columns
```

Out[7]:
```
Index(['episode_number', 'startup_number', 'brand_name', 'description',
       'deal_offered', 'startup_ask_amount_lakhs', 'startup_ask_percentage',
       'startup_ask_valuation', 'deal_amount_lakhs', 'deal_equity',
       'deal_valuation', 'loan_element_present', 'loan_amount',
       'rannvijay_present', 'abish_present', 'aman_present', 'aman_invested',
       'anupam_present', 'anupam_invested', 'ashneer_present',
       'ashneer_invested', 'ghazal_present', 'ghazal_invested',
       'namita_present', 'namita_invested', 'peyush_present',
       'peyush_invested', 'vineeta_present', 'vineeta_invested',
       'sharks_offering', 'amount_per_shark', 'equity_per_shark'],
      dtype='object')
```

In [8]:
```python
sharks_data.describe()
```

Out[8]:

	episode_number	startup_number	deal_offered	startup_ask_amount_lakhs	startup_ask_percentage	startup_ask_valuation	deal_amount_lakhs	deal_equity	deal_valuation	loan_element_present
count	121.000000	121.000000	121.000000	121.000000	121.000000	121.000000	121.000000	121.000000	121.000000	121.00000
mean	19.305785	61.000000	0.561983	312.338851	5.083306	4230.182727	31.925629	8.799421	473.770826	0.07438
std	10.375326	35.073732	0.498206	2721.640471	3.882554	12329.894575	36.847011	12.948175	925.693471	0.26348
min	1.000000	1.000000	0.000000	0.001010	0.250000	0.010000	0.000000	0.000000	0.000000	0.00000
25%	11.000000	31.000000	0.000000	45.000000	2.000000	666.670000	0.000000	0.000000	0.000000	0.00000
50%	19.000000	61.000000	1.000000	50.000000	5.000000	1333.330000	21.000000	3.000000	100.000000	0.00000
75%	28.000000	91.000000	1.000000	80.000000	7.000000	3000.000000	50.000000	15.000000	500.000000	0.00000
max	36.000000	121.000000	1.000000	30000.000000	25.000000	120000.000000	150.000000	75.000000	6666.670000	1.00000

8 rows × 30 columns

In [9]:
```python
sharks_data.isnull().sum()
```

Out[9]:
```
episode_number              0
startup_number              0
brand_name                  0
description                 0
deal_offered                0
startup_ask_amount_lakhs    0
startup_ask_percentage      0
startup_ask_valuation       0
deal_amount_lakhs           0
deal_equity                 0
deal_valuation              0
loan_element_present        0
loan_amount                 0
rannvijay_present           0
abish_present               0
aman_present                0
aman_invested               0
anupam_present              0
anupam_invested             0
ashneer_present             0
ashneer_invested            0
ghazal_present              0
ghazal_invested             0
namita_present              0
namita_invested             0
peyush_present              0
peyush_invested             0
vineeta_present             0
vineeta_invested            0
sharks_offering             0
amount_per_shark            0
equity_per_shark            0
dtype: int64
```

In [10]:
```python
sharks_data['deal_offered'].value_counts()
```

Out[10]:
```
1    68
0    53
Name: deal_offered, dtype: int64
```

In [11]:
```python
sharks_data['peyush_present'].value_counts()
```

Out[11]:
```
1    92
0    29
Name: peyush_present, dtype: int64
```

In [12]:
```python
sharks_data['vineeta_present'].value_counts()
```

Out[12]:
```
1    70
0    51
Name: vineeta_present, dtype: int64
```

In [13]:
```python
sharks_data['namita_present'].value_counts()
```

Out[13]:
```
1    110
0     11
Name: namita_present, dtype: int64
```

In [14]:
```python
sharks_data['ghazal_present'].value_counts()
```

Out[14]:
```
0    95
1    26
Name: ghazal_present, dtype: int64
```

In [15]:
```python
sharks_data['ashneer_present'].value_counts()
```

Out[15]:
```
1    98
0    23
Name: ashneer_present, dtype: int64
```

In [16]:
```python
sharks_data['anupam_present'].value_counts()
```

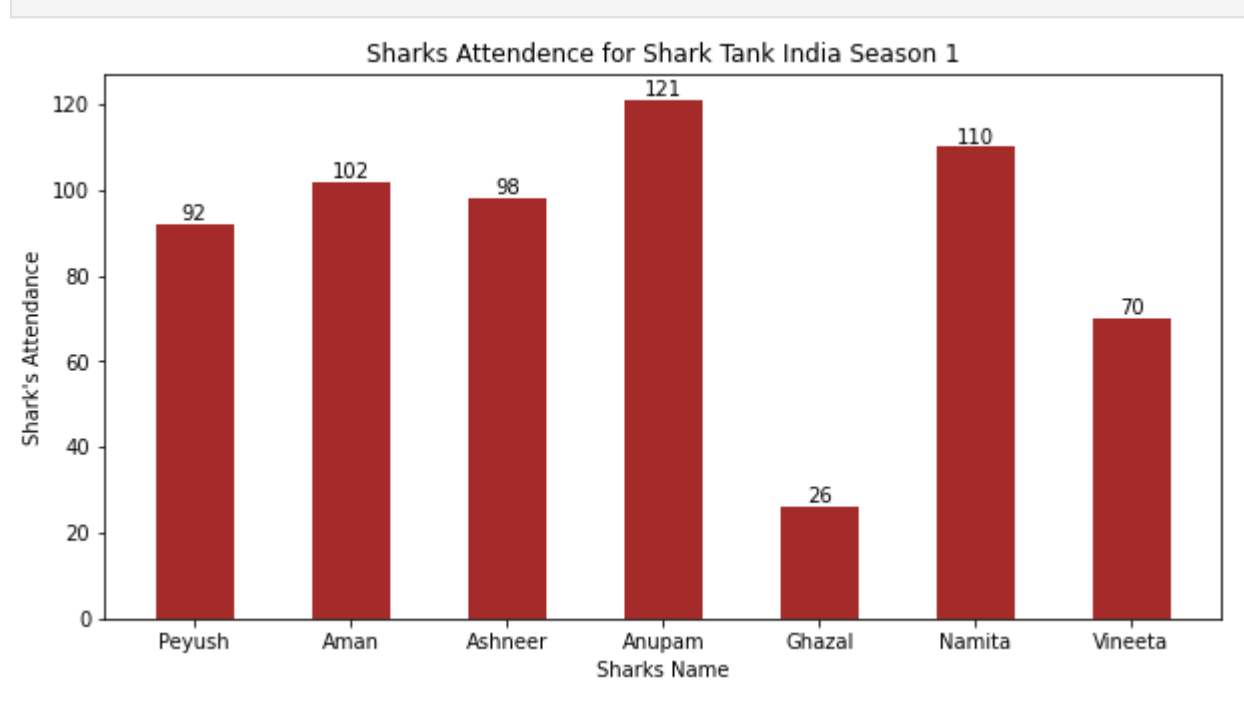
Out[16]:
```
1    121
Name: anupam_present, dtype: int64
```

In [17]:
```python
sharks_data['aman_present'].value_counts()
```

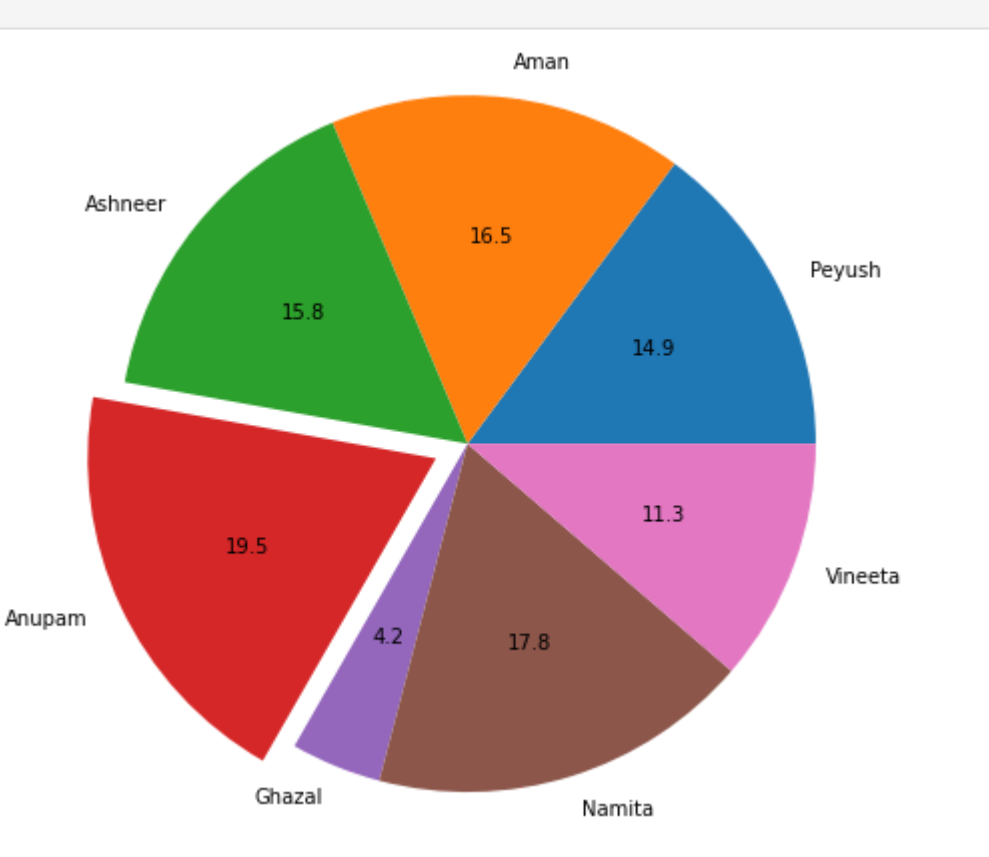
Out[17]:
```
1    102
0     19
Name: aman_present, dtype: int64
```

In [18]:
```python
peyush_present=len(sharks_data[sharks_data.peyush_present==1])
aman_present=len(sharks_data[sharks_data.aman_present==1])
ashneer_present=len(sharks_data[sharks_data.ashneer_present==1])
anupam_present=len(sharks_data[sharks_data.anupam_present==1])
ghazal_present=len(sharks_data[sharks_data.ghazal_present==1])
namita_present=len(sharks_data[sharks_data.namita_present==1])
vineeta_present=len(sharks_data[sharks_data.vineeta_present==1])
```

In [19]:
```python
fig=plt.figure(figsize=(10,5))
names=['Peyush','Aman','Ashneer','Anupam','Ghazal','Namita','Vineeta']
present=[peyush_present,aman_present,ashneer_present,anupam_present,ghazal_present,namita_present,vineeta_present]
plt.bar(names,present,width=0.5,color='brown')
plt.xlabel('Sharks Name')
plt.ylabel("Shark's Attendance")
plt.title("Sharks Attendence for Shark Tank India Season 1")
for i in range(len(names)):
    plt.text(i,present[i],present[i],ha="center",va="bottom")
plt.show()
```

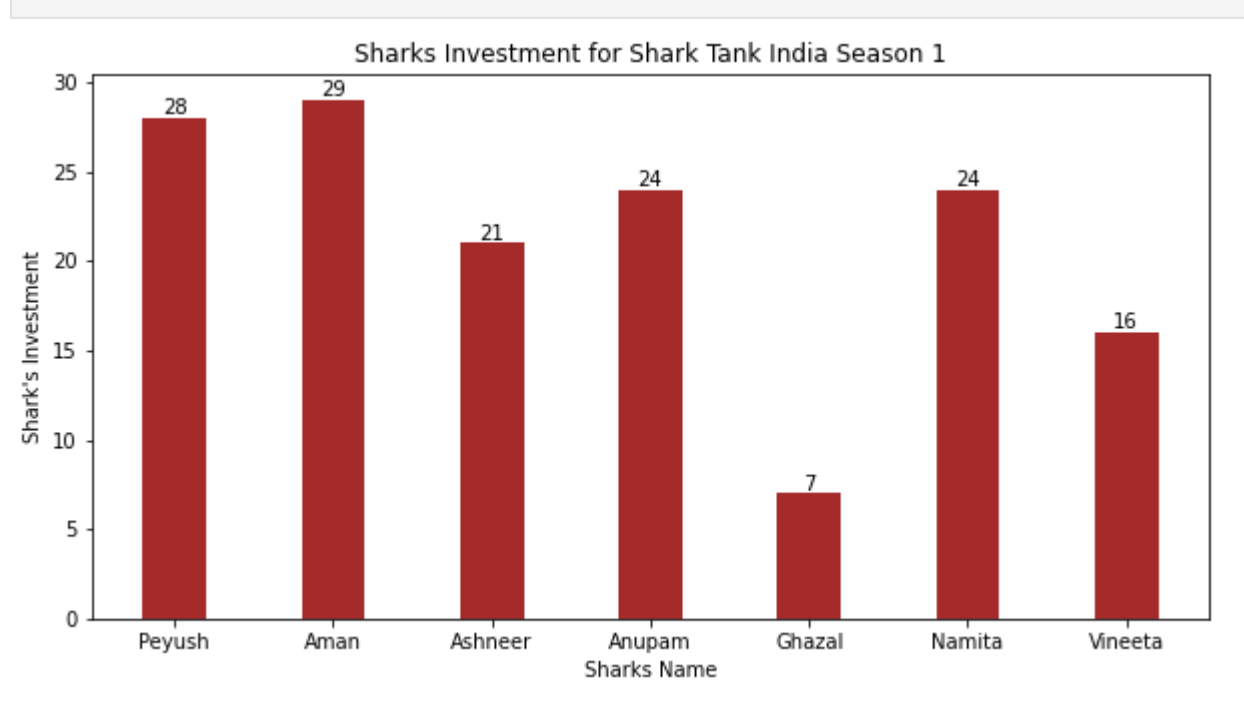


In [20]:
```python
plt.pie(present,labels=names,radius=2,autopct='%0.1f',explode=[0,0,0,0.20,0,0,0])
plt.show()
```

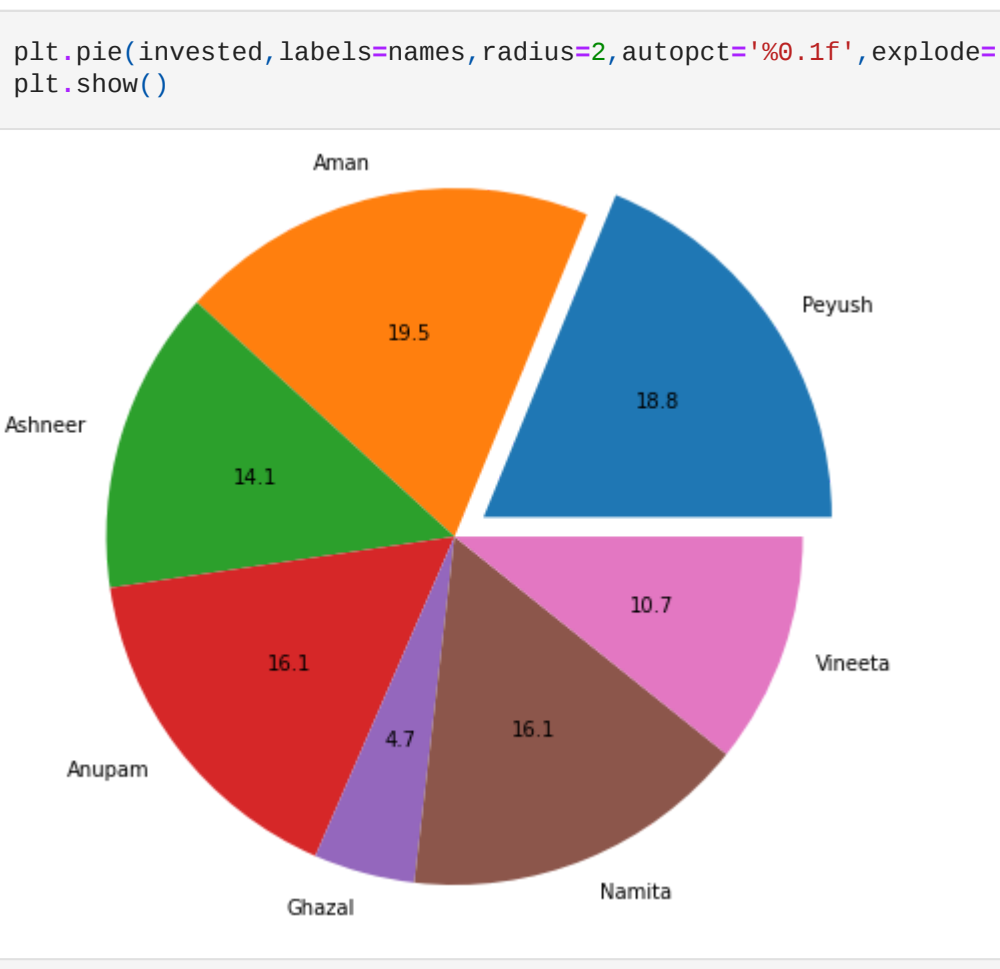


In [21]:
```python
peyush_invested=len(sharks_data[sharks_data.peyush_invested==1])
aman_invested=len(sharks_data[sharks_data.aman_invested==1])
ashneer_invested=len(sharks_data[sharks_data.ashneer_invested==1])
anupam_invested=len(sharks_data[sharks_data.anupam_invested==1])
ghazal_invested=len(sharks_data[sharks_data.ghazal_invested==1])
namita_invested=len(sharks_data[sharks_data.namita_invested==1])
vineeta_invested=len(sharks_data[sharks_data.vineeta_invested==1])
```

In [22]:
```python
fig=plt.figure(figsize=(10,5))
names=['Peyush','Aman','Ashneer','Anupam','Ghazal','Namita','Vineeta']
invested=[peyush_invested,aman_invested,ashneer_invested,anupam_invested,ghazal_invested,namita_invested,vineeta_invested]
plt.bar(names,invested,width=0.4,color='brown')
plt.xlabel('Sharks Name')
plt.ylabel("Shark's Investment")
plt.title("Sharks Investment for Shark Tank India Season 1")
for i in range(len(names)):
    plt.text(i,invested[i],invested[i],ha='center',va="bottom")
plt.show()
```



In [27]:
```python
plt.pie(invested,labels=names,radius=2,autopct='%0.1f',explode=[0.20,0,0,0,0,0,0])
plt.show()
```



In [29]:
```python
fig=plt.figure(figsize=(20,25))

x=['Present','Investment']
c=['orange','green']

# Peyush Details
peyush=[peyush_present,peyush_invested]

plt.subplot(4,2,1)
plt.bar(x,peyush,width=0.5,color=c)
plt.title("Peyush",color='red')
for i in range(len(x)):
    plt.text(i,peyush[i],peyush[i],ha="center",va="bottom")

# Aman Details

aman=[aman_present,aman_invested]

plt.subplot(4,2,2)
plt.bar(x,aman,width=0.5,color=c)
plt.title("Aman",color='red')
for i in range(len(x)):
    plt.text(i,aman[i],aman[i],ha="center",va="bottom")

# Anupam Details

anupam=[anupam_present,anupam_invested]

plt.subplot(4,2,3)
plt.bar(x,anupam,width=0.5,color=c)
plt.title("Anupam",color='red')
for i in range(len(x)):
    plt.text(i,anupam[i],anupam[i],ha="center",va="bottom")

# Ashneer Details

ashneer=[ashneer_present,ashneer_invested]

plt.subplot(4,2,4)
plt.bar(x,ashneer,width=0.5,color=c)
plt.title("Ashneer",color='red')
for i in range(len(x)):
    plt.text(i,ashneer[i],ashneer[i],ha='center',va='bottom')

#Vineeta Details

vineeta=[vineeta_present,vineeta_invested]

plt.subplot(4,2,5)
plt.bar(x,vineeta,width=0.5,color=c)
plt.title("Vineeta",color="red")
for i in range(len(x)):
    plt.text(i,vineeta[i],vineeta[i],ha='center',va='bottom')

#Ghazal Details

ghazal=[ghazal_present,ghazal_invested]

plt.subplot(4,2,6)
plt.bar(x,ghazal,width=0.5,color=c)
plt.title("Ghazal",color="red")
for i in range(len(x)):
    plt.text(i,ghazal[i],ghazal[i],ha='center',va='bottom')

#Namita Details

namita=[namita_present,namita_invested]

plt.subplot(4,2,7)
plt.bar(x,namita,width=0.5,color=c)
plt.title("Namita",color="Red")
for i in range(len(x)):
    plt.text(i,namita[i],namita[i],ha='center',va='bottom')
```

In [25]:
```python
print("Induvidual Rate of investment with respect to attendance are\n")
percentage=[]
for i in range(len(present)):
    percentage.append(round((invested[i]/present[i])*100,2))
    print(f"{names[i]} percentage is {percentage[i]}\n")
```

```
Induvidual Rate of investment with respect to attendance are

Peyush percentage is 30.43

Aman percentage is 28.43

Ashneer percentage is 21.43

Anupam percentage is 19.83

Ghazal percentage is 26.92

Namita percentage is 21.82

Vineeta percentage is 22.86
```

In terms of Number , who invested in more number of Ideas ?

In [26]:
```python
max_amount=0
j=0
for i in range(len(names)):
    if invested[i]>=max_amount:
        max_amount=invested[i]
        j=i

print(f"{names[j]} has invested in {max_amount} number of Ideas which are highest among all Sharks.")
```

```
Aman has invested in 29 number of Ideas which are highest among all Sharks.
```

In [ ]: