Date	15th October 2022
Team ID	PNT2022TNID14568
Project Name	Visualizing And Predicting Heart Diseases with An Interactive Dash Board
Maximum Marks	4 Marks

```
In [4]:   df = pd.read_csv('abalone.csv')

In [5]:   df
```

Out[5]:

	Sex	Length	Diameter	Height	Whole weight	Shucked weight	\
0	M	0.455	0.365	0.095	0.5140	0.2245	
1	M	0.350	0.265	0.090	0.2255	0.0995	
2	F	0.530	0.420	0.135	0.6770	0.2565	
3	M	0.440	0.365	0.125	0.5160	0.2155	
4	I	0.330	0.255	0.080	0.2050	0.0895	
...	...	...	...	...	...	...	
4172	F	0.565	0.450	0.165	0.8870	0.3700	
4173	M	0.590	0.440	0.135	0.9660	0.4390	
4174	M	0.600	0.475	0.205	1.1760	0.5255	
4175	F	0.625	0.485	0.150	1.0945	0.5310	
4176	M	0.710	0.555	0.195	1.9485	0.9455	

```
In [6]:   df.head()
```

Out[6]:

	Sex	Length	Diameter	Height	Whole weight	Shucked weight	Visce weig
0	M	0.455	0.365	0.095	0.5140	0.2245	0.10
1	M	0.350	0.265	0.090	0.2255	0.0995	0.04
2	F	0.530	0.420	0.135	0.6770	0.2565	0.14
3	M	0.440	0.365	0.125	0.5160	0.2155	0.11
4	I	0.330	0.255	0.080	0.2050	0.0895	0.03

```
In [7]:   df.tail()
```

Out[7]:

	Sex	Length	Diameter	Height	Whole weight	Shucked weight	\
4172	F	0.565	0.450	0.165	0.8870	0.3700	
4173	M	0.590	0.440	0.135	0.9660	0.4390	
4174	M	0.600	0.475	0.205	1.1760	0.5255	
4175	F	0.625	0.485	0.150	1.0945	0.5310	
4176	M	0.710	0.555	0.195	1.9485	0.9455	

Open in

In [37]:
```python
sns.boxplot(df.age)
```

```
C:\Users\cselab\anaconda3\lib\site-packages\seabor
n\_decorators.py:36: FutureWarning: Pass the follo
wing variable as a keyword arg: x. From version 0.
12, the only valid positional argument will be `da
ta`, and passing other arguments without an explic
it keyword will result in an error or misinterpret
ation.
  warnings.warn(
```
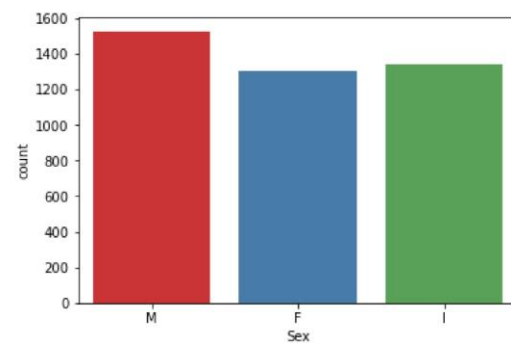
Out[37]:
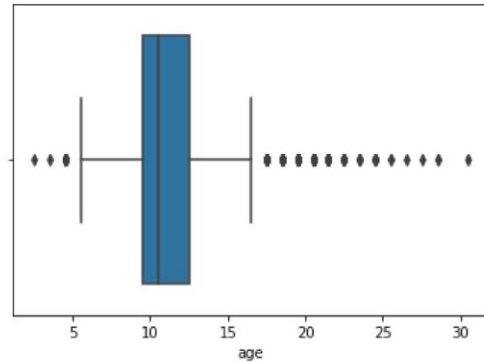
In [38]:
```python
sns.countplot(x = 'Sex', data = df, palette = 'Se
```
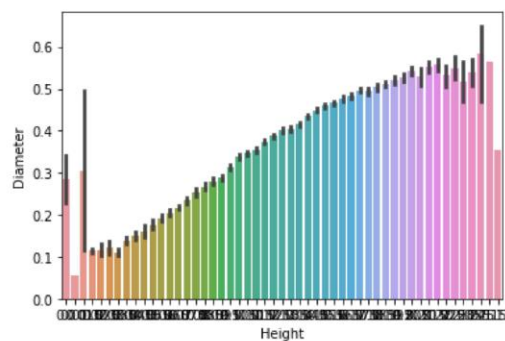
Out[38]:

In [52]:
```python
sns.barplot(x=df.Height,y=df.Diameter)
```

Out[52]:

Out[56]: `Index(['Sex'], dtype='object')`

In [57]:
```python
plt.figure(figsize = (20,7))
sns.heatmap(df[numerical_features].corr(),annot =
```
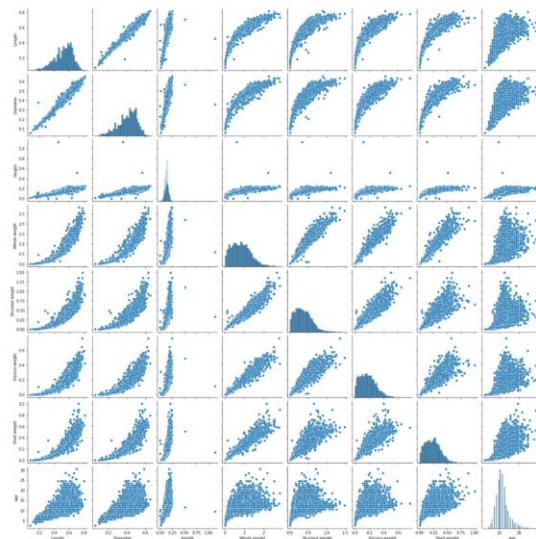
Out[57]:

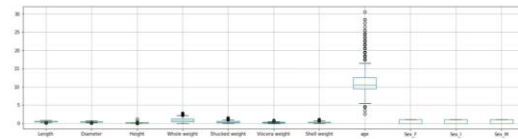In [58]:
```python
#Multivariate Analysis
```

In [59]:
```python
sns.pairplot(df)
```

Out[59]:

In [85]:
```python
df = pd.get_dummies(df)
dummy_df = df
df.boxplot( rot = 0, figsize=(20,5))
```

Out[85]:

In [86]:
```python
df.drop(df[(df['Viscera weight']> 0.5) & (df['age
df.drop(df[(df['Viscera weight']<0.5) & (df['age'
```

In [87]:
```python
df
```

Out[87]:

	Length	Diameter	Height	Whole weight	Shucked weight	Viscera weight
0	0.455	0.365	0.095	0.5140	0.2245	0.1010
1	0.350	0.265	0.090	0.2255	0.0995	0.0485
2	0.530	0.420	0.135	0.6770	0.2565	0.1415

In [88]:
```python
var = 'Shell weight'
plt.scatter(x = df[var], y = df['age'])
plt.grid(True)
```