In [246]:

```
Basic_Definitions = {
'Title': ['Title of Graph figure'],
'subtitle': ['Description / comments for graph figure can be added'],
'legend': ['Which describes elements of graph '],
'color': ['Colour of plots/lines/curves that we are using'],
'types of lines': ['solid, dashed,dotted, dash-dotted'],
'xlim': ['X axis limit a(number) to b(number)'],
'ylim': ['Y axis limit a(number) to b(number)']
}
import pandas as pd
Write_DF = pd.DataFrame(Basic_Definitions)
Write_DF.head()
```

Out[246]:

	Title	subtitle	legend	color	types of lines	xlim	ylim
0	Title of Graph figure	Description / comments for graph figure can be...	Which describes elements of graph	Colour of plots/lines/curves that we are using	solid, dashed,dotted, dash-dotted	X axis limit a(number) to b(number)	Y axis limit a(number) to b(number)

In [247]:

```
Basic_Graph_Types = {
    'Bar plot':['Rectangualar bars proportional to x,y'],
    'histogram':['Similar to bar graph with x axis-ranges'],
    'pie plot':['Circular graph with percent/ Fraction data-set'],
    'scatter plot':['Represents relations between two sets of data']
}
Write_DF = pd.DataFrame(Basic_Graph_Types)
Write_DF.head()
```

Out[247]:

	Bar plot	histogram	pie plot	scatter plot
0	Rectangualar bars proportional to x,y	Similar to bar graph with x axis-ranges	Circular graph with percent/ Fraction data-set	Represents relations between two sets of data

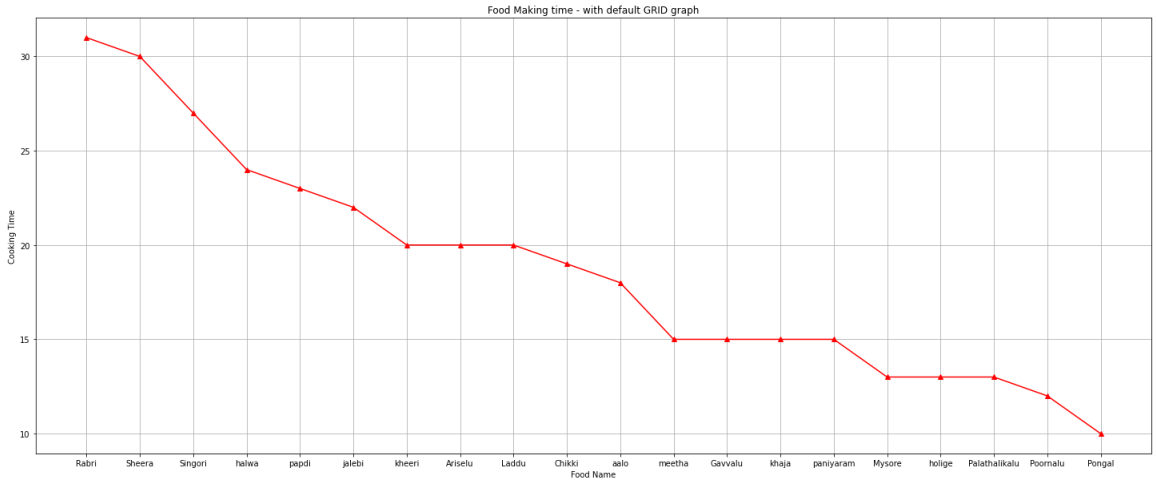
In [248]:

```
##########################################   SAMPLE Food Data set   ##################
##########################
df=pd.read_csv('dslab3_dataset1.csv')
print(df)
```

```
            name  prep_time  cook_time           state region  cost
0          Rabri         10         31   Uttar Pradesh  North    15
1         Sheera         11         30     Maharashtra   West    15
2        Singori         13         27     Uttarakhand  North    25
3          halwa         15         24   Uttar Pradesh  North    24
4          papdi         16         23     Maharashtra   West    33
5         jalebi         15         22          Odisha   East    25
6         kheeri         15         20          Odisha   East    25
7        Ariselu         15         20  Andhra Pradesh  South    35
8          Laddu         18         20  Andhra Pradesh  South    24
9         Chikki         19         19     Maharashtra   West    25
10          aalo         20         18       Karnataka  South    24
11        meetha         22         15       Telangana  South    35
12       Gavvalu         23         15  Andhra Pradesh  South    24
13         khaja         25         15  Andhra Pradesh  South    25
14     paniyaram         26         15          Kerala  South    34
15        Mysore         26         13       Karnataka  South    25
16        holige         29         13       Karnataka  South    34
17  Palathalikalu         29         13  Andhra Pradesh  South    25
18       Poornalu         30         12  Andhra Pradesh  South    22
19         Pongal         31         10      Tamil Nadu  South    23
```

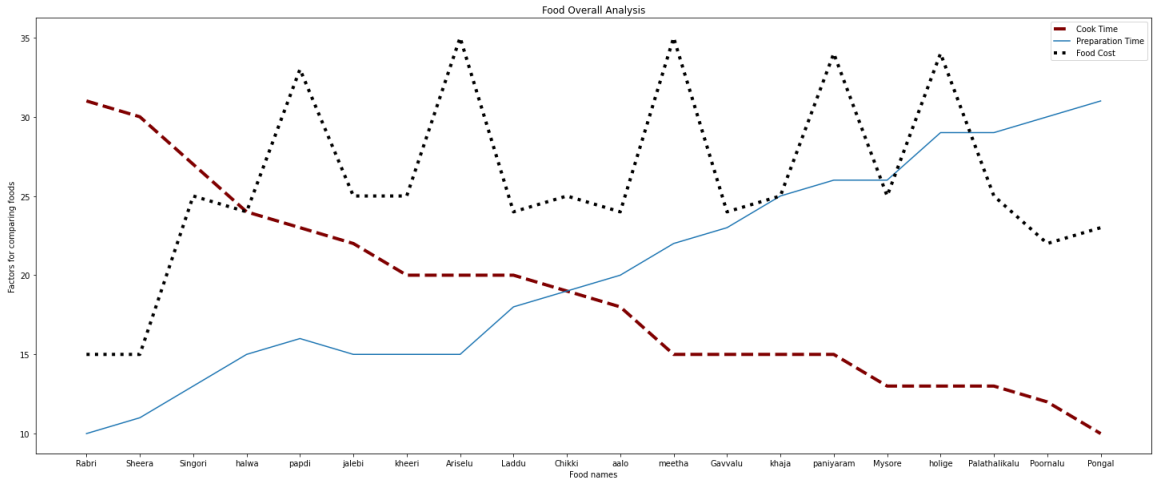
In [249]:

```
import matplotlib.pyplot as plt
x= df.name
y= df.cook_time
plt.figure(figsize=(25,10))
my_plot = plt.plot(x,y)
plt.xlabel("Food Name")
plt.ylabel("Cooking Time")
plt.title('Food Making time - with default GRID graph')
plt.grid(True)
plt.setp(my_plot,color='red',marker='^')
plt.show()
```



In [250]:

```
#Multi line Graph
plt.figure(figsize=(25,10))
plt.plot(df.name,df.cook_time , label = "Cook Time",c='maroon', ls=('dashed') , lw =4)
plt.plot(df.name,df.prep_time, label = "Preparation Time")
plt.plot(df.name,df.cost, label = "Food Cost",c='black', ls=('dotted'), lw =4)
plt.xlabel("Food names")
plt.ylabel("Factors for comparing foods")
plt.title('Food Overall Analysis')
plt.legend()
plt.show()
```



In [251]:

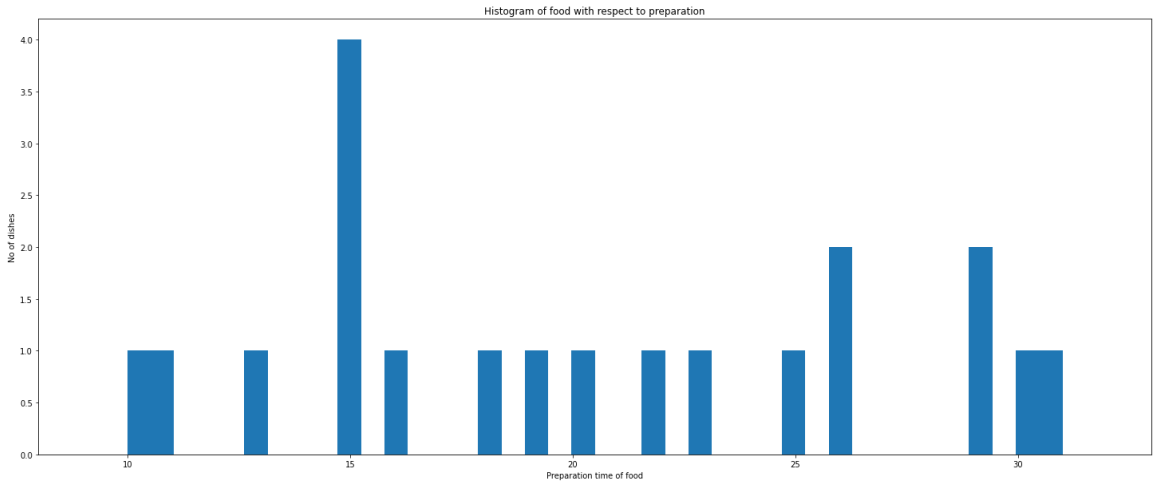
```
plt.figure(figsize=(25,10))

myplot = plt.bar(x,y)

plt.xlabel("Food Name")
plt.ylabel("Cooking Time")
plt.title('Food Making time via Bar graph')
plt.setp(myplot,color='pink')
plt.show()
```

In [252]:

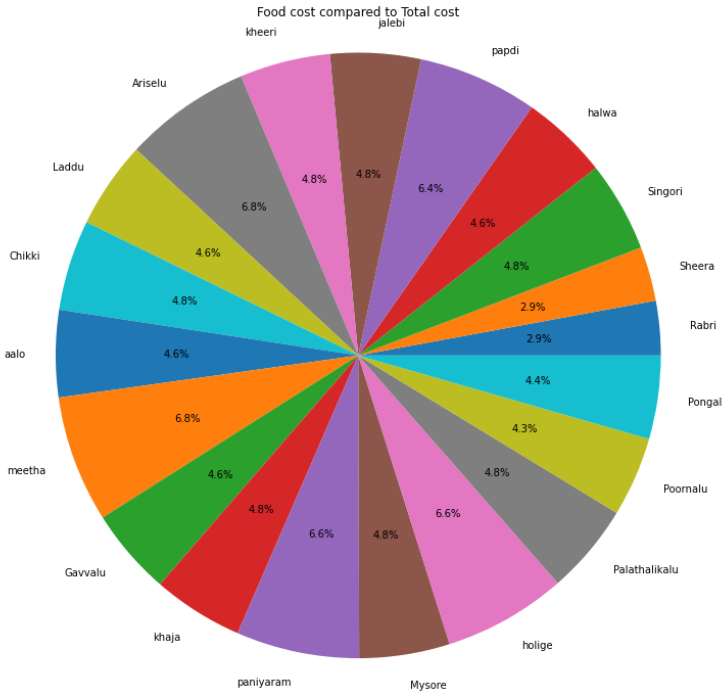
```
#Histogram Graph
plt.figure(figsize=(25,10))
Preparation_time= df.prep_time
plt.hist(Preparation_time,40)
plt.xlabel("Preparation time of food")
plt.xlim(8,33) #Limiting X axis
plt.ylabel("No of dishes")
plt.title('Histogram of food with respect to preparation')
plt.show()
```



In [253]:

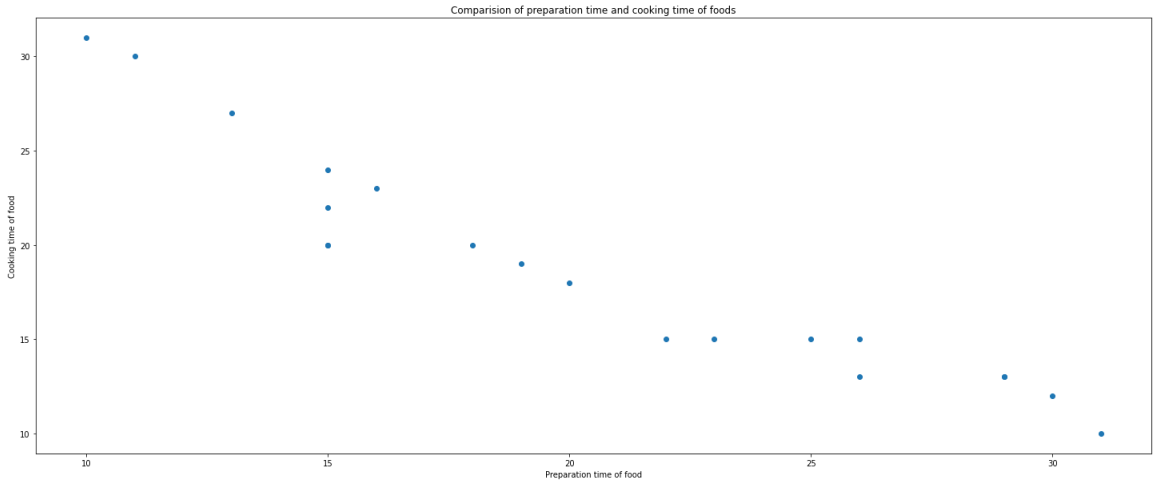
```
#Pie Graph
fig = plt.figure
fig(figsize=(20,12))


plt.pie(df.cost, labels = df.name,autopct='%1.1f%%')
plt.title('Food cost compared to Total cost')
plt.axis('equal')
plt.show()
```



In [254]:

```
#Scatter Plot Graph
plt.figure(figsize=(25,10))
region = df.region
Cook_time= df.cook_time
plt.scatter(df.prep_time,df.cook_time )
plt.xlabel("Preparation time of food")
plt.ylabel("Cooking time of food")
plt.title('Comparision of preparation time and cooking time of foods')
plt.show()
```



In [ ]:

In [ ]:

In [ ]: