Activity 3 – Creating a Basis for Visualization

Please print this paper and keep it for reference purposes. It will be signed by the professor in charge to mark its completion and record.

Group Name: _____Quadcore_____   Date:

_____ Group Members:

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For each group, choose two data sets from the following:

a. Index of Industrial Production   c.   Internet usage
    Link: Link:
    https://drive.google.com/open?id=1JHzsJGXkz05LJstUvt   https://drive.google.com/open?id=1FCcoy1KMvhdZp1uysUn6_SX
    6V7ZYRl20sUyQ2   hZjo6czc

b. Agricultural Production   d.   Tourist Visitors
    Link: Link:
    https://drive.google.com/open?id=1FN6Wja6ROk_m4Bc   https://drive.google.com/open?id=1i59zBtNkkg2M4cOB
    V-wtbwyp7Z8z9BU9vS   QP-0rQWE4ZcCmU2X

Data Set	Series
Internet Usage	Internet Usage In the Philippines
Tourist Visitors	Tourist Visitors in the Philippines

1. Find out the correlation of each data set chosen. For data sets with multiple series, choose only one to correlate with the other.
2. Display the scatterplot of the data pairs.
3. Then answer the following:

Regression Model	Equation	R-Value	Correlation Scale
Linear	$y = 243.23x - 483729$ for tourists $y = 2.9945x - 5976.6$ for Internet Users	0.98 0.96	Strong positive
Exponential	$y = 7E\text{-}54e^{0.0551x}$ $y = 1E\text{-}139e^{0.1609x}$	$R^2 = 0.9886$ and $R^2 = 0.9236$	Strong positive
Simple Power/ Logarithmic	$y = 487697\ln(x) - 4E\text{+}06$ and $y = 6006.6\ln(x) - 45643$	$R^2 = 0.9799$ and $R^2 = 0.964$	Strong positive
Hyperbolic			

Please note of the following *in scaling the correlation*
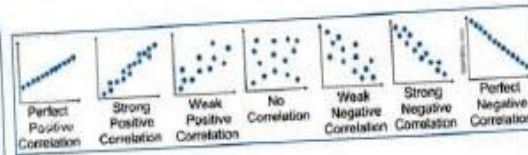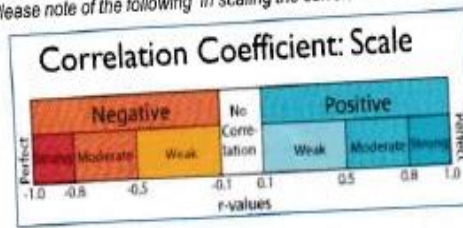
Correlation Coefficient: Scale
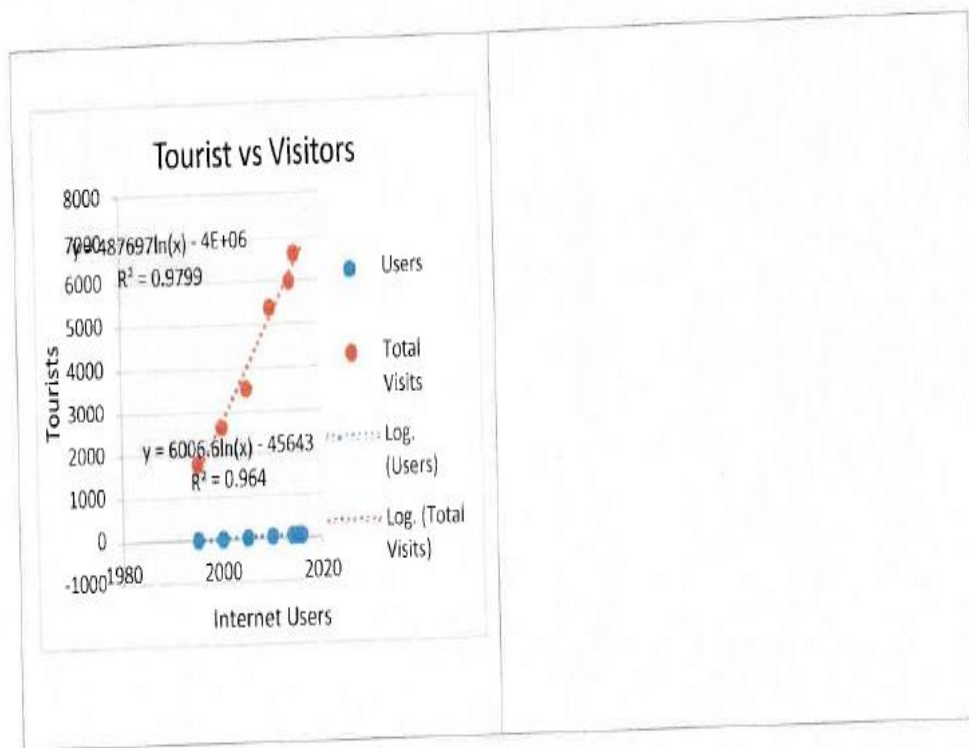
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Module 3

Visual Graphics Design

For each of the Regression Models, plot the scatterplot together with the curves it pertains. Label them properly.

	Linear		Exponential
Equation	y = 243.23x – 483729 for tourists y = 2.9945x - 5976.6 for Internet Users	Equation	$y = 7E-54e^{0.0951x}$ $y = 1E-139e^{0.1609x}$
R Value	0.9802 and 0.9641	R Value	$R^2 = 0.9886$ and $R^2 = 0.9236$

	Simple Power/ Logarithmic		Hyperbolic
Equation	y = 487697ln(x) - 4E+06 and y = 6006.6ln(x) - 45643	Equation	
R Value	$R^2 = 0.9799$ and $R^2 = 0.964$	R Value	

Tourist vs Visitors

Chart "Tourist vs Visitors" with y-axis labeled "Tourists" (from -1000 to 8000) and x-axis labeled "Internet Users" (1980, 2000, 2020).

Text on chart:
$y = 7090487697\ln(x) - 4E+06$
$R^2 = 0.9799$

$y = 6006.6\ln(x) - 45643$
$R^2 = 0.964$

Legend:
- Users
- Total Visits
- Log. (Users)
- Log. (Total Visits)

Which regression model best describes the data pairs that was chosen? Describe the model.

Based on the scatterplots above, the exponential model has the highest R value, which means, having the higher accuracy from the other regression models.

Instructors signature: _____

By signing this, the members are marked as COMPLETE in this activity.
Please record promptly for future reference,