



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SECP1513 - SECTION 04

ASSIGNMENT 4

ASSIGNMENT 4: Data Analytics using Microsoft Power BI

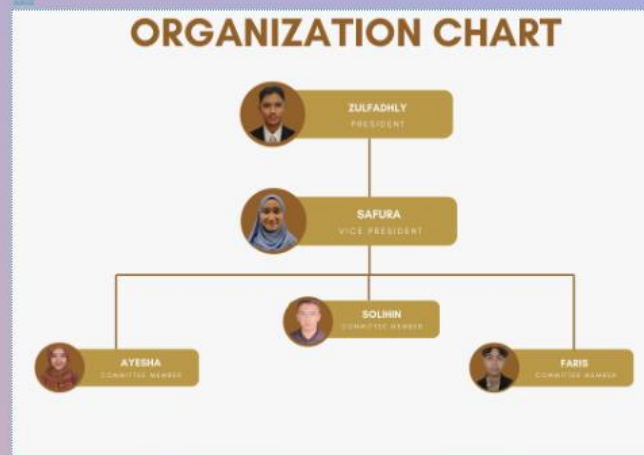
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Due Date: 15/11/2021

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Data Analytics using Microsoft Power BI



Assignment 4 TTS IGROUP 23





Trends of Data Analytics in Different Sectors

Data analytics can be defined as a set of approaches for extracting relevant and meaningful informations from large and diverse volume of data collected from many sources and ranging in size. As our country have many sectors which are Agriculture, Manufacturing, Financial Services, Oil and Gas, ICT, Aviation, Wholesale and Retail, Tourism and Healthcare along With Production and Consumption Data. For example, Tourism and Healthcare along with Production can expand its network by using data analytics. How? Data analytics technologies can help organisations on this sector make data-drive decisions that improve business outcomes. More effective marketing, additional revenue opportunities, consumer personalisation, and increased operational efficiency may be among the benefits. The advantages, when combined with a successful strategy, can create a competitive competitors.

Reflection of these trends

As a student, my reflection is that because of these data analytics trends, all sectors in our country, Malaysia, have the opportunity to expand our skills in order to compete with other countries around the globe. Furthermore, based on those trends it deals with information, dashboards and reports, so the visualization of the data will enlighten the companies to identify ways in doing business and improve their performances. It helps the companies understand their clients better, analyze their promotional campaigns, customize content, create content strategies and develop products. Data analytics also will answer the most important questions that will be asked as references in run business. Therefore, it is clear that data analytics is important especially in the future to lead smarter moves and more efficient operations for achieving the main goals in developing business.





Who needs to use this Microsoft Power BI?

Usually, this power BI can be utilized by a wide spectrum of workers inside a company due to its user-friendly design. It can build the dashboard based on what data that has been imported and what information users require access to depending on what role you are in. For example, a manager has a different perspective from the new employer but both of them can use the Power BI to visualize the information that they want to access. Aside from the sector of business, Power BI also can be used as a self-service tool by various branches to check on the data more clearly. The conclusion is, power BI can report on almost anything since it works with the data you give it such as finance, marketing, sales, information technology and many more.

Industrial Talk 7

Ref:

What is Microsoft Power BI?

Microsoft Power BI is a business analytics tool that allows you to visualise data and share insights throughout your company, or integrate them in your app or website. These features help a company or a user for a better understanding about data they work to. Basically, Power BI is quite similar to excel but now Power BI offers more visualization and analysis tasks that are far beyond the capability of excel.

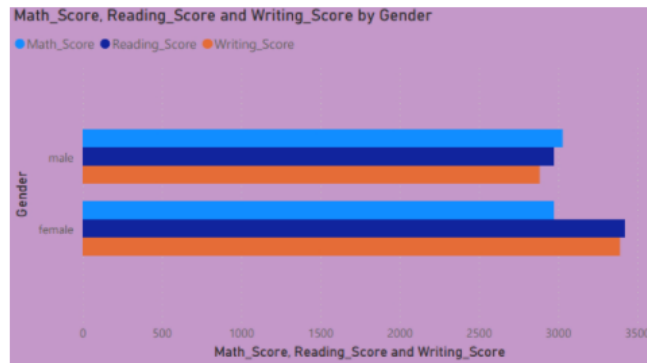
When do we need to use the Microsoft BI?

Power BI are used when we need to create a data visualization from the usual table. Power BI will help to connect a variety of data sources and "cleans up" the information it receives so that it may be more easily digested and comprehended. Automatically, it can be easily more understood for the user to produce reports and visualizations that can be shared by the user.

We also use power BI when we need to recognise patterns in data and use those patterns to generate educated predictions and conduct all the possible questions in the user's mind. Last but not least this Microsoft Power BI also used when we need to create the projections and plan from the data that we save.

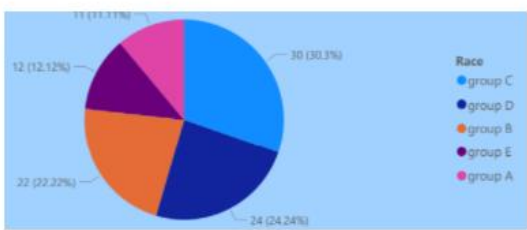
Mathematical Score, Reading Score, and Writing Score by Gender

The chart below is built to compare the total score of subjects taken by the student between male and female. There are three types of subjects which are mathematics, reading and also writing. For both reading and writing scores, females get a better score than male which are near to 3500 points respectively while for both male scores are below 3000. But, for the mathematical score males get higher score than female which is 3027 while female students only get 2971.



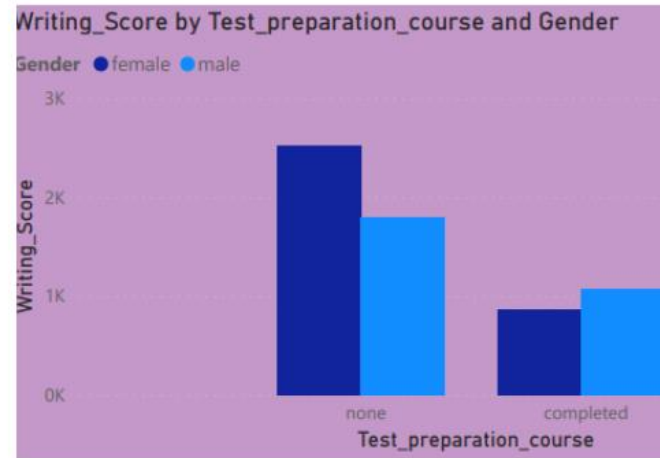
Count of Parental Level of Education by Race

There are 5 groups of race or ethnicity which are group A, group B, group C, group D and group E. The percentage of parental level of education is taken in this pie chart. The race with the highest parental level of education is from group C with the percentage of 30.3% while the race with the lowest parental level of education is from group A holding a percentage of 11.11%. There is quite a high count of parental level of education for group D and group B which are 24.24% and 22.22% respectively. Lastly, the race from group E only has 12.12% of parental level of education



Writing Score by Test Preparation based on Gender

The bar chart below shows the comparison between female and male about writing scores by test preparation course. The test preparation is also being compared either they completed and none completed yet. There were shown that female students that had not completed their preparation for writing test have total scores in the range 2000 to 3000 while male students' writing score that had same condition with female students before.



Link for the online dashboard (.html) is submitted separately.