Project Brief

Project title	**Implement Data Visualisation techniques using Power BI for HR Attrition file**
Module Name	**NICF-Data Queries and Visualization Basics (SF)**
Course Name	**NICF-Diploma in Infocomm Technology (Data)**
Project Start date	
Project Submission Date	

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1.   Purpose of this Project

This Project is used for Summative Assessment of Learner in the Module 'Data Queries and Visualization Basics' of the NICF Course '**NICF Data Queries and Visualization Basics(SF)**"

This Project considers the skills required to design & create data visualizations using Power BI

2.   Project Pre-requisites

You should have completed the following activities before
– Viewed and understood all the e-content related to the module
– Completed all the MCQ tests related to the module
– Completed all the Assignment / Lab Exercises of the module

You should have access to the Project Brief, Project Report template and should understand how to use the templates

You have access to the Project Technical Environment

You should understand the number of milestones and what are the milestones to be presented for each of the Tutoring Session

To implement the project, you will need a MS Windows Computer and MS PowerBI , Power BI

3.   Project Outcomes & Deliverables

You should perform all the tasks in the Project Task List and prepare the following during the project:
– Implement the project on MS PowerBI , Power BI and prepare Power BI dashboard to demonstrate data visualization.
– Prepare a Project Report as per pre-defined template

4.   Project Definition

The Sample Data Set "Attrition.xls" consists of attrition status of employees of a company.

Analyse which of the following factors or combination of factors are affecting the attrition and how (whether positive or negative)

– Age
– Daily Rate
– Distance from Home
– Gender
– Job Satisfaction
– Marital Status
– Years at Company
– Years since last promotion
– Years with current Manager
– Work Life Balance
– Stock Option Level
– Standard Hours
– Relationship Satisfaction
– Performance Rating
– Percent Salary Hike
– Overtime

5. Project Task List

For the above case study, perform the following project activities:

Activity 1: Identify the factors influencing the Data Visualization

– Extract data from HR Attrition excel
– Identify which of the visualizations – static or interactive is required
– Identify the audience of data visualization and their size
– Identify the level of details required for data visualization (drill down) (grouping)
– Decide the colours required for visualization
– Decide the layout of the visualization
– Prepare a 2-page report explain each of the above with Justifications and include in the Project Report

Activity 2: Review the Project Data Set:

– Identify the total volume of data
– Analyse how diverse the data is based on Job role, age group education etc.
– Prepare a 2-page report explain each of the above with Justifications and include in the Project Report

Activity 3: Select the appropriate data visualization technique for gathering the required insights from the Project data set

– Select one or more data visualization techniques among the following - Line Charts, Word Clouds, Network Diagram, Bar Chart, Scatter Plot, Pie Chart used in the Project
– Justify why you are using the techniques and why you have ruled out other techniques

Activity 4: Develop the Data Visualizations

– Develop the data visualization in PowerBI
– Attached the weblink of your project with data visualizations, as annexure to your Project Report
– Include a snapshot of your data visualizations in PowerBI

6. Project Evidences

You should prepare the following project evidences as part of your Project Report and Presentation:

All Activities		Evidence
1-4	Project Report	Screenshot for all pages and a table with visual, outcome of the tasks in the page and justification of the visual

7.   Project Guidelines

You should follow the below guidelines while implementing the Project:
– Implement the project in the technical environment specified in the Project brief
– Follow the format specified for Project Report
– The project report and the weblink of PBI should be submitted at least 2 days before the date of Summative Assessment date
– Present the Milestones in every Tutoring Session and seek the Tutor's feedback and review. Incorporate the feedback in your project.
– Attach all project evidences for each milestone as part of your Project report

8.   Project Assumptions

   – You can treat all the 4 activities as an individual milestone.
   – You can assume that the data is for a period of 12 months
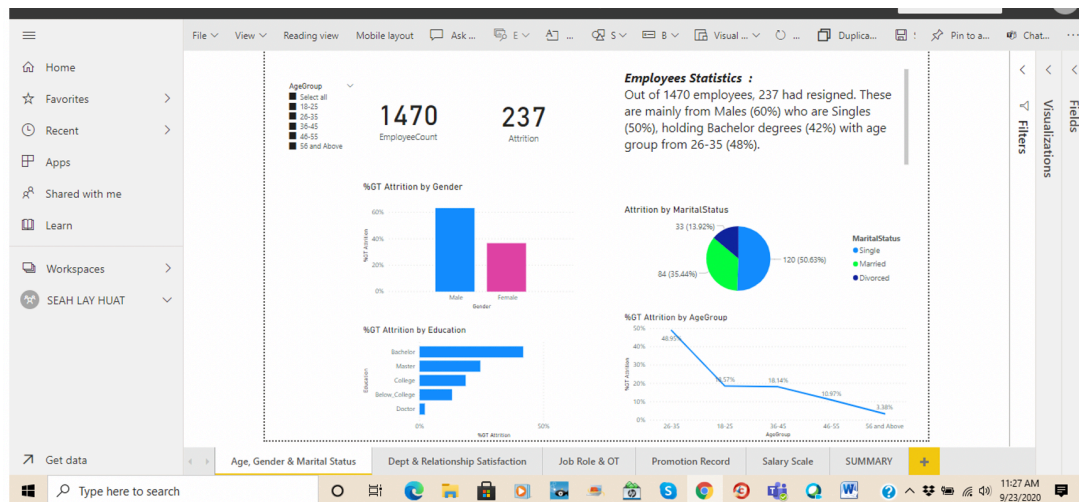
9.   Project Technical Environment

The Learner should perform the project in the following environment
– Power BI Service
– The Learner should have the following tools installed on his/her Windows machine:
– Power BI Service

10.   Structure of Project Report

– Index of the Project Report (1 Page)
– *Project Overview:* Describe the Project along with Project Outcomes and tools used (1 Page)
– *Factors that influence Data Visualization:* List and Explain the factors such as static or interactive data, audience of data visualization, frequency of data visualization, level of details etc.
– *Visualization Techniques:* List and describe the visualization techniques considered along with justification why they were used or not used for all the pages

Visuals	Outcome	Justification
Stacked Column Chart (Gender)	63% Males 36% Females More Males have left the company	Data are shown in vertical bars, the tallest has the highest data. As there are only 2 categories, it does not look complicated.
Clustered Bar Chart (Education)	Bachelor degrees tops at 41%	Another way to display data in horizontal bars showing individual category.
Pie Chart (Marital Status)	Singles is the highest at 50%	As there are only 3 categories, the proportions are shown clearly in a glance.