PROCEDURE DOC

**Collecting Data :**

For the dashboard to be created, consider a dataset of the user/client.The project moves based on the user's requirements.

Dataset needs to be transformed so that it will become suitable for power BI.

**Data transformation :**

To transform data set, follow below steps:

i.Open power BI

ii.click on import option which is present on power BI screen.

iii. After clicking on import data, a window will pop out where you need to select name of the excel file. We should click transform option so that it will become suitable for power BI tool.

After clicking transform , a screen will be opened which is called as power query screen.This screen has many options that allows us to do transformations.

Follow are some transformations

i . Click on transform then click on Unpivot columns :

It will bring all dates below a particular attribute.

ii . Convert Value attribute values in to decimal.

iii . Add Year as another column. Convert year to text.

These are some transformations that are made.If needed we can make much more.

After these, click on close and apply.

All changes will be applied to our data and will be loaded in to power BI.

**Creating Key Measures :**

After loading data, create a table for all formulas that we are going to use further.

For that

i . click on Home which is on the taskbar of the power BI screen

ii . Click on 'Enter Data' which comes on taskbar after clicking on Home.

a screen will pop out. In the field area of name write 'key measures'.It will create a seperate folder which will be shown on right of the screen under fields section.

**Creating Measures required:**

Now create measures using below formulas :

**Values = SUM(FinData[value])**

**Total Income = CALCULATE (SUM([FinData(Date)]),finData[type]="Income")**

**Total Expense = CALCULATE (SUM([FinData(Date)]),finData[type]="Expenses")**

**Total savings= CALCULATE (SUM([FinData(Date)]),finData[type]="savings")**

For the above formulas , we need to change their output into Indian rupees.

For that ,you will find Format dropbox on the taskbar. Select 'currency' and then select Indian rupees.

Create another two measures Expense % , Savings % using below formulas.

**Expense % = DIVIDE([Total Expense],[Total Income])**

**Savings % = DIVIDE([Total savings],[Total Income])**

For the above 2 measures, select format as percentage.We can get percentage of savings and

expenses here.

**Creating Key Performance Indicators :**

After creating all measures, create 4 boxes for 4 KPI's i.e.

i . Total Income

ii . Expense %

iii . Savings %

iv . Networth

Drag and drop all these 4 measures on top left of the screen so that 4 values will appear on the screen.

Click on category off button to get rid of the name.If you click on these kpi boxes , there will be lot more options displayed on the right of the screen left to visualisation section.Category option can found below the search bar.If we want to change text size, color we can change using these options available.

Create 4 small text box to write names of KPI's .

After doing all changes required, next step we are gonna do is to create Timeline selection.

**Creating Timeline :**

For creating Timeline selection , follow below steps :

i . Drag and drop year from fields section to the right top of the screen.

ii . If you drag and drop you will find a box on the screen. Click on the box to make some changes like changing orientation and title of the timeline box.

After clicking on the box, there will be options provided in the left side of screen where you will find 'General'.

Click on it.Then you will find another option 'orientation'.Click on it and change the orientation to Horizontal.

We can click 'off' slice header to make 'title header' disappear.

For items, we can also change background.Change it to white so that when we click on a year we can clearly see which year we were selecting.

After creating years timeline, create months by copy pasting the year timeline box.copy pasting is one of the advantage that power BI provides.

After copy pasting , place Date in the field to get months in the timeline box that is copied.

We can change format of the date also.For that goto model that is on the left side of the screen.In the model, select Date from the table.In the format on taskbar write date format as 'mmm yy'.

**Creating Stagnant Key Performance Indicators :**

For the next step, go to dashboard. now create another 4 measures which are stagnant. copy and paste all 4 KPI's .Decrease textsize of the KPI's so that we can differentiate stagnant and changing KPI's.For the below KPI's write 'Alltime' in a small text box.

For both the stagnant and changing KPI's .Click on the format option of the taskbar and click on Align.In align, click distribute horizontally so that both stagnant and changing KPI's will be distributed horizontally.

For the below KPI's to make it stagnant, Goto 'edit interactions' which is available on the taskbar of the power BI screen.

After clicking on edit interactions , 🚫 symbol will appear for each item.Select 2 time line boxes and select this symbol 🚫 for each item of present in the stagnant KPI's.So that this 'all time' KPI's will become stagnant and shows total values of our data.

**Creating Title :**

To create title , create a new measure called 'title' with the below formula.

Title = "Finance Dashboard".

Drag and drop title measure on to the screen.

We can decrease or increase font size based on our requirement.

**Barcharts for components of Savings and Expenses :**

In the next step, we are going to create barcharts for total expenses and savings.

For that follow below steps:

i . Drag and drop barchart from visualization section which is present on the right side of the power BI screen.

ii . A barchart box will be created on the screen where you dropped. Select that box.

iii . Now drop component in axis option which will be available on the right side of the screen left to visualization section.

iv . Also drag and drop Total Expenses in values option.

There is a seeting called 'General' available below the search bar . Click that option and switch on y axis and switch off x axis.So that we will get horizontal barchart.

Now copy paste the above barchart. Drag and drop 'Savings'. Now savings barchart will be created.We can change data color also by using the options provided.

**Creating trend Charts for each components using tooltip :**

For each and every component present in the barchart we can show trend over years using a special weapon of power BI called 'tooltip'.

If we hover on a particular component of the barchart if we create a tooltip it will show a pop up screen with trend chart in it.

To create a tooltip We need to follow below steps.

i . Create a new page by clicking on '+' symbol available on the screen.

ii . In the new page created.Make it a tooltip page by clicking on tooltip option which is available under page Information of the visualisation section of the power BI screen.

For the trends of components, goto dashboard and Copy and paste the expenses barchart .Now drag and drop linechart.For linechart , put component in legend field and Date in Axis field which are available on the screen if we select the Linechart.All components trends will be created in the linechart.Now put this line chart in the tooltip page.After this we need to make use of the totip page in the dashboard page.For that follow below steps :

i . goto dashboard.

ii . Select Barchart.

iii . Click on Tooltip which is under search bar on the right of the screen left to the visualization section.

iv . Click on page. select TT1.

Now If we hover on the component of expenses barchart we will get a pop screen with trends in it.

In the similar way, we do it for savings barchart also.

**Savings in accordance with Income Change Month over Month :**

To check whether user spending money in accordance with the change in his income, we need to calculate Income change month over month

So to calculate Income change month over month follow the below steps:

i. Create a measure called '**Income LM**'.This measure gives income of last month.

On the left panel of power BI screen, there is a subheading called 'key measures' under the heading 'Fields'.Left Click on key measures and create a measure.

A space will be created on top of the screen below the task bar.

Write the below formula in that space.

Formula is :

**Income LM = CALCULATE([Total income],DateAdd(findata[date],-1,MONTH))**

ii.Create another measure by clicking on new measure.

Name it as Income change MOM %

Formula is :

**Income change MOM % = DIVIDE([Total income],[Income LM])**

In the taskbar,there is a dropbox called format where we need to select percentage, so that we will get Income change month over month in percentage.

click on visualization which is on the right panel of the screen.

In visualization, select line chart.

For line chart add income change MOM % , savings %, Expenses %as values. Just drag and drop these measures under values.

Under Axis dropbox of linechart, drag and drop Date.

A line chart with curves of three components will be created.

Note: We can keep title of the graph if needed.We can change positions of output legends based on our choice.Color of the curves of graph can be changed.A lot more options are provided under this section.

Create savings target measure by clicking on new measure.

Savings target = 0.25.

Click on format and select percentage.

Drag and drop this measure on to the line chart.

This savings target line will be drawn on the savings expenses curve from which user can know whether he/she meeting savings target every month.

There is option called focus mode on the linechart which will give broad view of the curves of the graph.

**Creating detailed Information in table format :**

A table with full details will be created.

In the visualization section , drag and drop symbol table.A table will be created on the screen.

For the table drag and drop 'values' key measure in to the drop box 'values'.

Add type and component in the rows dropbox.

Add Year in the columns dropbox of the table.

With these clicks a table with all components details and total values will be shown on screen.

We can see details of a particular month or year by using the timeline chart that is created earlier.

In the next step, a tooltip for networth is created to view networth trend over years.

To create networth trend , follow the below steps:

i. Create a new measure called cumulative Networth with below formula:

**Cumulative Networth =**

**CALCULATE {**

**([Total saving],FILTER(All(FinData[Date]),FinData[Date]<=MAX(FinData[Date]))**

**}**

In the format , change it to currency. In the dropbox of currency select Indian rupees.There is a field in the taskbar for no.of decimal points.Change the decimal places to 1.

Using the above measure, a tooltip should be created.

To create tooltip, add another page by clicking on + symbol on the power BI screen.In the new page, Drag and drop the cumulative Networth measure.Click Line chart in the visualization section which is present on the right of the screen.For Linechart add Date under Axis and cumulative Networth under values.

For the tooltip page we can change title text also.

After creating tool tip, we need to add this to the main dashboard.For that click on page information which is under search bar on the right side.Click on 'page information' and on the tooltip option and add created tooltip in the page option.

In the dashboard if we hover on networth trend value we will get trend of networth over years in a pop window like screen.