

# 1.0 Worksheet Plan

## 1.1 The Goal

To develop an Excel template that users can use to prepare master budget for a specific quarter by entering relevant basic assumptions.

## 1.2 Results Outcome

- Sales Budget
- Production Budget
- Purchases Budget
- Direct Labour Budget
- Factory Overhead Budget
- Cash Budget
- Cost of Goods Sold Budget
- Forecasted Income Statement
- Forecasted Balance Sheet as at 30 September 2001
- Quarter Summary

## 1.3 Information Needed

- Previous quarter Balance Sheet
- Actual and budgeted unit sales
- All basic assumptions

## 1.4 Calculation Performed

- Budgeted Sales = Sales x Selling Price
- Budgeted Production = Closing Stock + Sales – Opening Stock
- Budgeted Purchases = (Total Raw Material Needed + Opening Stock – Closing Stock) x Cost per Unit
- Total Budgeted Labour Cost = Budgeted Labour Cost for Dept 1 + Budgeted Labour Cost for Dept 2
- Budgeted Labour Cost = Budgeted Production x Labour Hours Needed x Cost

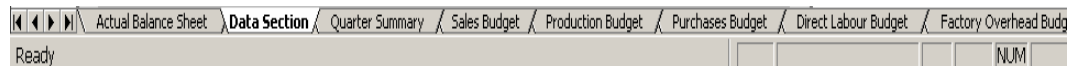
- Total Budgeted Overhead Cost = Budgeted Overhead Cost for Dept 1 + Budgeted Overhead Cost for Dept 2
- Budgeted Overhead Cost = Budgeted Production x Budgeted Hours Needed x Cost
- Cash Closing Balance = Opening Balance + Total Receipts – Total Payments
- Cost of Goods Sold per unit = Materials + Labour + Overhead
- Total Cost of Goods Sold = Cost of Goods Sold per unit x Budgeted Sales unit
- Gross Profit = Sales – Total Cost of Goods Sold
- Budgeted Net Profit = Gross Profit – Expenses

## 2.0 Worksheet Sketch

### 2.1 Worksheet

The template has been developed from the Actual Balance sheet and Data Section sheet. These two sheets contain all the information needed to perform the preparation of the master budget.

Secondly, all budgets and forecasted statements are developed one by one from Sales Budget to Quarter Summary. Formulas are entered in the budgets individually.



*Figure 2.1: Sheets Tabs*

When all of the budgets and forecasted statements are prepared with formulas being inserted, the worksheets are tested using known result. This is done to check the accuracy of the formulas entered.

## 2.2 Additional Features

After the formulas are verified to be accurate, it comes to process to add more features into the template for the ease of users. Being identified Data Section, where users are asked to enter the basic assumptions, as the most important part of the whole template, more work have to be done in this sheet. Instructions are added into the sheet just beside every box.

Besides that, I have taken advantages of the Data Validation tool in Microsoft Excel. This tool has been used to validate the input of the data. Cells have been set to accept only certain value; any invalid data being entered will be stop with useful message error.

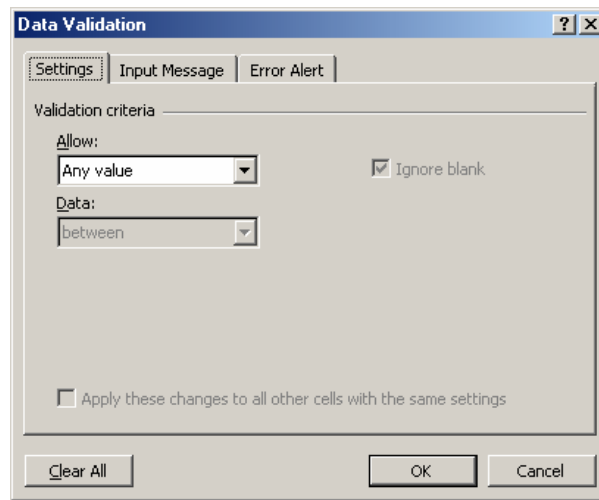


Figure 2.2: Data Validation

Freeze Panes tool is being utilised to let users view two part of the worksheet at once.

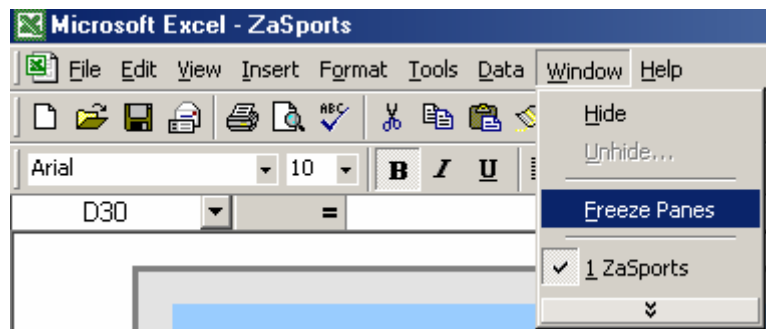


Figure 2.3: Freeze Panes

Group and Outline tool is being utilised to group up certain specific rows in certain budget.

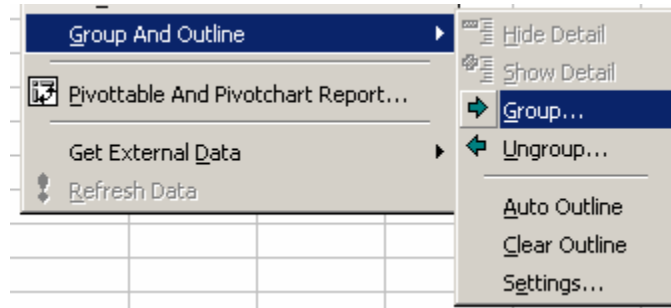


Figure 2.4: Group Columns

<b>Receipts:</b>			
<b>Sales</b>			
In the month	\$8,690.00	\$9,108.00	\$8,800.00
Following month	\$16,700.00	\$21,725.00	\$22,770.00
Second following month	\$8,400.00	\$10,020.00	\$13,035.00
<b>Total Receipts</b>	<b>\$42,021.00</b>	<b>\$42,940.78</b>	<b>\$45,325.33</b>
<b>Payments:</b>			
<b>Purchase of Materials</b>			
In the month	\$3,287.93	\$2,733.23	\$2,857.80
Following month	\$4,440.00	\$7,671.83	\$6,377.53
Total Payment for purchases	\$7,727.93	\$10,405.05	\$9,235.33
<b>Wages</b>	<b>\$6,857.00</b>	<b>\$6,670.40</b>	<b>\$6,626.40</b>
<b>Factory Overhead</b>	<b>\$11,175.80</b>	<b>\$10,868.00</b>	<b>\$10,791.00</b>
<b>Selling and Administration</b>	<b>\$12,000.00</b>	<b>\$12,000.00</b>	<b>\$12,000.00</b>
<b>Sales Commissions</b>	<b>\$2,172.50</b>	<b>\$2,277.00</b>	<b>\$2,200.00</b>
<b>Total Payments</b>	<b>\$39,933.23</b>	<b>\$42,220.45</b>	<b>\$40,852.73</b>
<b>Closing Balance</b>	<b>\$2,087.78</b>	<b>\$720.33</b>	<b>\$4,472.60</b>

Figure 2.5: Grouping Outcome

## 2.3 Designing Layout

The worksheets are being design for ease to read and attractiveness.

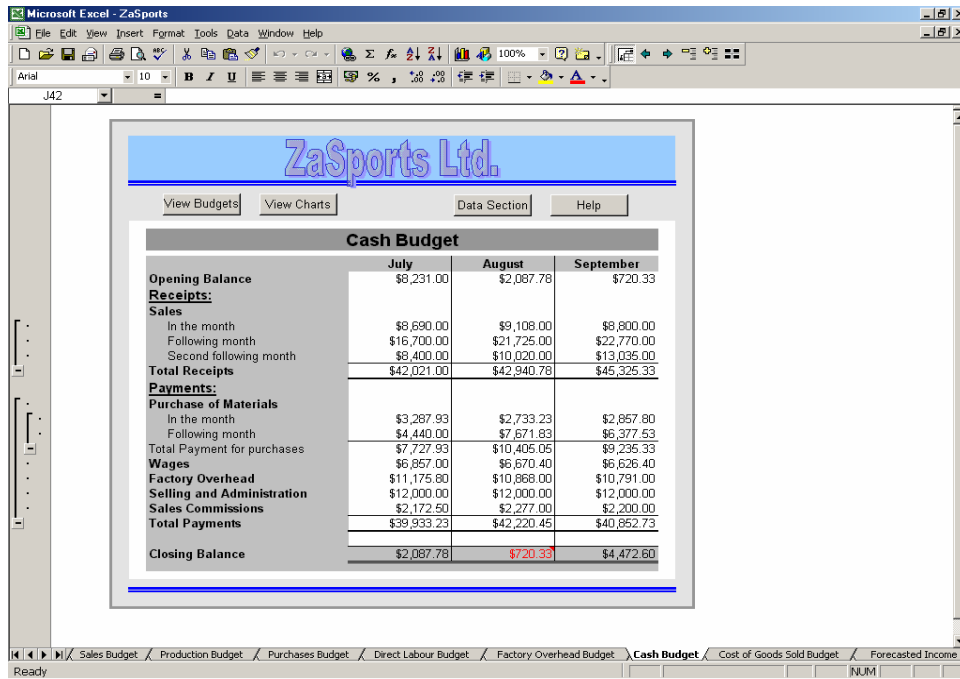


Figure 2.6: Layout Design

There are three sheets and one dialog being hide from the users' view.

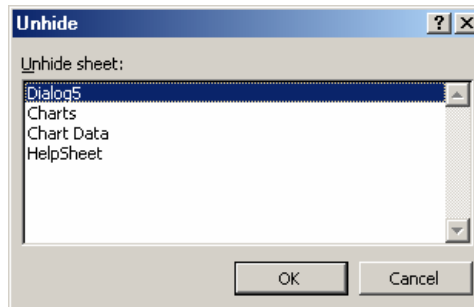


Figure 2.7: Hidden Sheets

Few columns are being hide for more attractive layout.

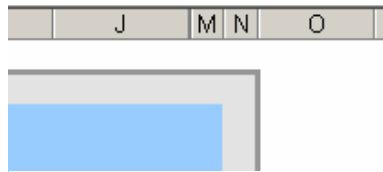


Figure 2.8: Hidden Sheets

Row & column headers and Horizontal scroll bar are being unchecked to give a more attractive layout.

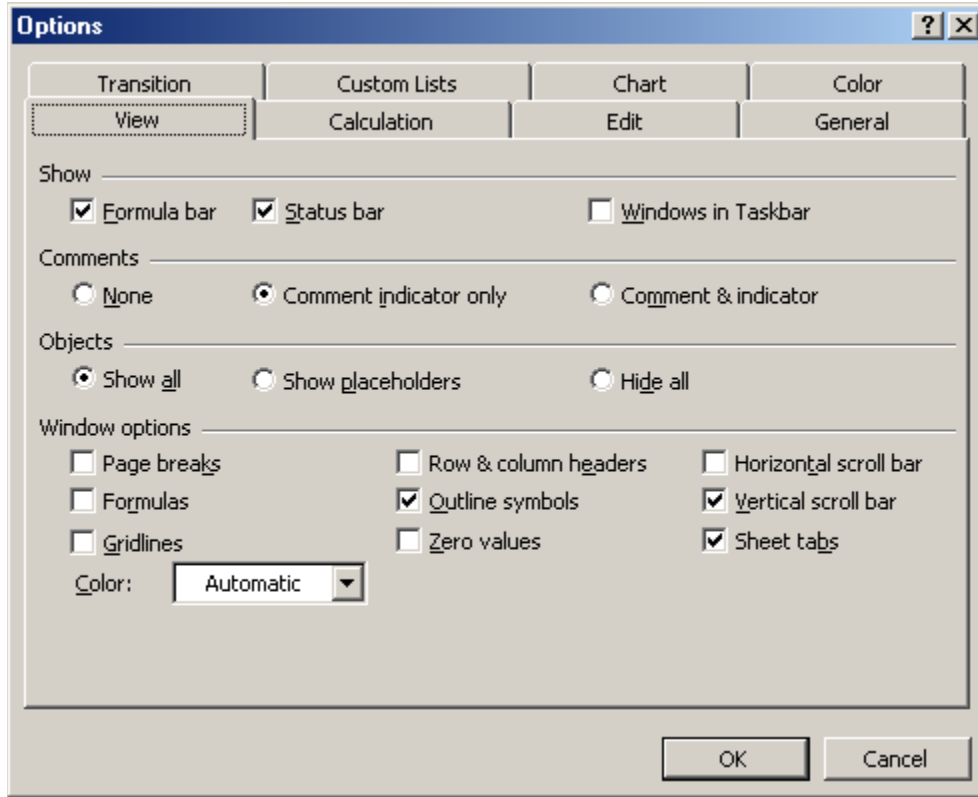


Figure 2.8: Options

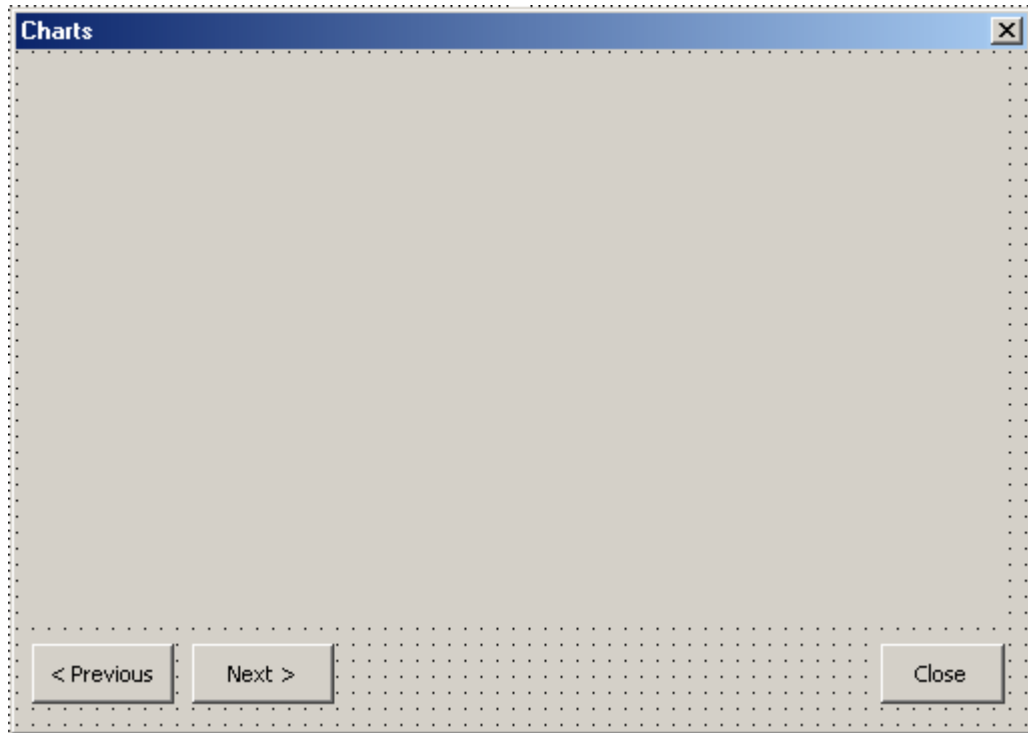
## 2.4 Macro

Macro is being developed to tell Microsoft Excel to perform certain required actions. Password to open in visual basic is za.

### Forms

Three forms have been used in this template as followed.

### Charts



This Charts form is used to show the charts, which are prepared accordingly to the budgets. Charts are shown in the image box separately by clicking Previous or Next buttons. The Close button is to close down the form.

### Visual Basic Code

```
Dim ChartNum As Integer

Private Sub Image1_Click()

End Sub

Private Sub UserForm_Initialize()
    ChartNum = 1
```

```
UpdateChart  
End Sub
```

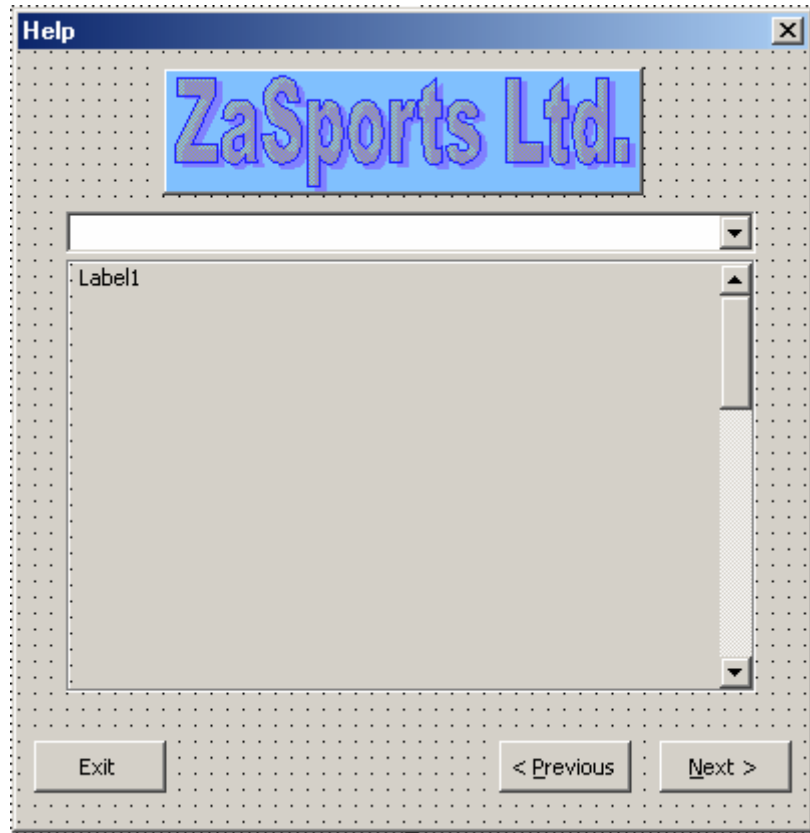
```
Private Sub PreviousButton_Click()  
    If ChartNum = 1 Then ChartNum = 9 Else ChartNum = ChartNum - 1  
    UpdateChart  
End Sub
```

```
Private Sub NextButton_Click()  
    If ChartNum = 9 Then ChartNum = 1 Else ChartNum = ChartNum + 1  
    UpdateChart  
End Sub
```

```
Private Sub CloseButton_Click()  
    Unload Me  
End Sub
```

```
Private Sub UpdateChart()  
    Set CurrentChart = Sheets("Charts").ChartObjects(ChartNum).Chart  
    CurrentChart.Parent.Width = 350  
    CurrentChart.Parent.Height = 200  
  
    ' Save chart as GIF  
    Fname = ThisWorkbook.Path & Application.PathSeparator & "temp.gif"  
    CurrentChart.Export FileName:=Fname, FilterName:="GIF"  
  
    ' Show the chart  
    Image1.Picture = LoadPicture(Fname)  
End Sub
```

## Help



The Help form provides help for an application. The help topics are stored in a worksheet, named HelpSheet. The topics are displayed in a dialog box. The user can select a help topic from a list (contained in a ComboBox), or use the Previous and Next buttons to scroll through the topics sequentially.

### Visual Basic Code

```
Option Explicit  
Dim TopicCount As Integer  
Dim CurrentTopic As Integer  
Dim HelpSheet As Worksheet
```

```
'CUSTOMIZE THE FOLLOWING STATEMENT TO CORRESPOND  
'TO THE WORKSHEET THAT CONTAINS THE HELP TOPICS  
Const HelpSheetName As String = "HelpSheet"
```

```
'CUSTOMIZE THE FOLLOWING STATEMENT TO  
'CHANGE THE CAPTION DISPLAYED ON THE FORM  
Const HelpFormCaption As String = "Help"
```

```
Private Sub UserForm_Initialize()  
' Executed before the form is shown  
    Dim Row As Integer  
    Set HelpSheet = ThisWorkbook.Sheets(HelpSheetName)  
    TopicCount =  
Application.WorksheetFunction.CountA(HelpSheet.Range("A:A"))  
    For Row = 1 To TopicCount  
        ComboBoxTopics.AddItem HelpSheet.Cells(Row, 1)  
    Next Row  
    ComboBoxTopics.ListIndex = 0  
    CurrentTopic = 1  
    UpdateForm  
End Sub  
  
Private Sub UpdateForm()  
' Updates the help topic  
    ComboBoxTopics.ListIndex = CurrentTopic - 1  
    Me.Caption = HelpFormCaption & " (" & CurrentTopic & " of " & TopicCount  
& ")"  
    With LabelTopic  
        .Caption = HelpSheet.Cells(CurrentTopic, 2)  
        .AutoSize = False  
        .Width = 212  
        .AutoSize = True  
    End With  
    Frame1.ScrollTop = 1  
    Frame1.ScrollHeight = LabelTopic.Height + 5  
    If CurrentTopic = 1 Then PreviousButton.Enabled = False Else  
PreviousButton.Enabled = True  
    If CurrentTopic = TopicCount Then NextButton.Enabled = False Else  
NextButton.Enabled = True  
    On Error Resume Next  
    If NextButton.Enabled Then NextButton.SetFocus Else  
PreviousButton.SetFocus  
End Sub  
  
Private Sub ComboBoxTopics_Click()  
' Executed when the ComboBox is changed  
    CurrentTopic = ComboBoxTopics.ListIndex + 1  
    UpdateForm  
End Sub  
  
Private Sub PreviousButton_Click()  
' Executed when the PreviousButton is clicked  
    If CurrentTopic <> 1 Then
```

```
    CurrentTopic = CurrentTopic - 1
    UpdateForm
End If
End Sub
```

```
Private Sub NextButton_Click()
' Executed when the NextButton is clicked
    If CurrentTopic <> TopicCount Then
        CurrentTopic = CurrentTopic + 1
        UpdateForm
    End If
End Sub
```

```
Private Sub ExitButton_Click()
' Executed when the ExitButton is clicked
    Unload Me
End Sub
```

```
Private Function SheetExists(sht) As Boolean
    Dim TempSheet As Worksheet
    On Error Resume Next
    Set TempSheet = ThisWorkbook.Worksheets(sht)
    If Err = 0 Then SheetExists = True Else SheetExists = False
End Function
```

## Welcome



The Welcome form is used to greet users with a basic introduction and three clickable buttons. The purpose of the buttons are easy to understand as its' label.

## Visual Basic Code

```
Private Sub Continue_Click()  
    Unload Me  
    Sheets("Data Section").Select  
End Sub
```

```
Private Sub ShowHelp_Click()  
    Unload Me  
    Help.Show  
End Sub
```

```
Private Sub CloseItDown_Click()  
    ThisWorkbook.Close savechanges:=False  
End Sub
```

## Modules

Option Explicit

Dim dlg As DialogSheet ' global variable

Sub SheetNavigation()

Dim ws As Worksheet

Application.ScreenUpdating = False

Set dlg = ActiveWorkbook.DialogSheets.Add

With dlg.DialogFrame

.Left = 0

.Top = 0

.Height = 150 ' dialog height

.Width = 210 ' dialog width

End With

dlg.Buttons(1).Left = 150 ' position of button1

dlg.Buttons(2).Left = 150 ' position of button2

With dlg.ListBoxes.Add(10, 15, 130, 130) ' size of listbox

For Each ws In ActiveWorkbook.Worksheets

If ws.Visible Then .AddItem ws.Name

Next ws

.ListIndex = 0

.OnAction = "DisplaySheet"

End With

dlg.DialogFrame.Text = "Select the budget you want to view."

dlg.Visible = False

Application.ScreenUpdating = True

If dlg.Show Then

Worksheets(dlg.ListBoxes(1).List(dlg.ListBoxes(1).ListIndex)).Activate

End If

Application.DisplayAlerts = False

dlg.Delete

Application.DisplayAlerts = True

Set ws = Nothing

Set dlg = Nothing

End Sub

Private Sub DisplaySheet()

Worksheets(dlg.ListBoxes(1).List(dlg.ListBoxes(1).ListIndex)).Activate

End Sub

Sub Auto\_Open()

StartMyApp

End Sub

```
Sub StartMyApp()  
    Welcome.Show  
End Sub
```

```
Sub ShowHelp()  
    Help.Show  
End Sub
```

```
Sub ShowChart()  
    Chart.Show  
End Sub
```

```
Sub DataSection()  
    Sheets("Data Section").Select  
End Sub
```

```
Sub Clear()  
    Sheets("Data  
Section").Range("E8,F8,D10:F12,D14:F16,D18:F19,E22,F22,E25:E27,D32:G33,  
E37:G38,E42:G43,E46,E49,E50,E53,E54,E57,E58,E61:E64").ClearContents  
End Sub
```

## 3.0 Template Illustrations

### 3.1 Introduction

**ZaSports Budget Template** is a template developed to help prepare a master budget for the upcoming quarter. The components of this budget are a monthly sales budget, production budget, purchases budget, direct labour budget, factory overhead budget, cash budget, cost of goods sold budget, forecasted income statement for the quarter and a forecasted balance sheet.

Users using this template need to enter the previous quarter balance sheet, actual and budgeted unit sales as well as the basic assumptions as to prepare the master budget.

### 3.2 Starting the Template

Whenever this template is opened, user will be first greeted by a Welcome message box with a basic introduction.



*Figure 3.1: Welcome Message Box*

This welcome message box will contain three click able buttons:

- I. **Continue button** is for continuing using the template, once clicked, user will be directed to the Data Section sheet to enter all basic assumptions.
- II. **First Time User button** is for those first time users of this template.
- III. **Exit button** is for exiting this template immediately without being prompted to save the template.

### 3.3 The Sheets

#### Data Section

Once the users click continues in the Welcome message box, the user will be directed to the Data Section. This is the sheet for users to enter all the basic assumptions needed to calculate the master budget.

**ZaSports Ltd.**

View Budgets View Charts Clear Data Section Help

**This template is used to prepare the master budget for the upcoming quarter. Please fill in all of the relevant basic assumptions in the white boxes below. Read the comments and instruction while entering the data. Click Clear to clear all of the data. (Note: You will not be able to undo after clicking clear)**

**Actual and Budgeted Unit Sales**

Month	Product A	Product B
April	2800	1400
May	1900	1500
June	2500	1400
July	3190	1925
August	3300	2090
September	3080	2200
October	3410	2310
November	3960	2530

**Selling Price**

	Product A	Product B
	\$10.00	\$6.00

**Sales Collection Period**

In the month

**Instruction:**  
 >>> Name of the product  
 >>> First 3 columns: Previous quarter with actual unit sales.  
 >>> Following 3 columns : Upcoming quarter with budgeted units sales. The three months for budget preparation.  
 >>> Final 2 columns: The followings months with budgeted units sales.  
 >>> Selling price per unit for both products.  
 Percentage of total sales to be

Figure 3.2: Data Section

The upper part of the Data Section sheet, where a horizontal black coloured line appeared, is being freeze so that users can view two part of the page at once. When users scrolling down the vertical scroll bar, only the second lower part of the page will be moving. This feature let users get it easy to click any of the five click able buttons whenever they wish to no matter how long they have scroll down the page.

### Entering Data

All of the white boxes will be needed to fill with proper data. Users will be given full instruction and comment in entering every data. Instruction is given on the right of the boxes. While comment will appear when a box is selected.

Actual and Budgeted Unit Sales		
Month	Product A	Product B
April	2800	1400
May	1900	1000
June	2500	1200
July	3100	1500
August	3300	2000
September	3080	2200

**Instruction:**  
Name of the product

First 3 columns: Previous quarter with actual unit sales.

Following 3 columns: Upcoming quarter with budgeted units sales. The three months for budget preparation.

**Actual Unit Sales**  
Enter the actual unit sales of the month here.

Figure 3.3: Instruction and comment

### Data Validation

For every data input, which is found to be invalid, the input of data will be stop and a Data Input Not Acceptable message box will appear request users to re-enter the data or to cancel the input. For example, users are not allowed to input alphabet characters in the Selling Price boxes.

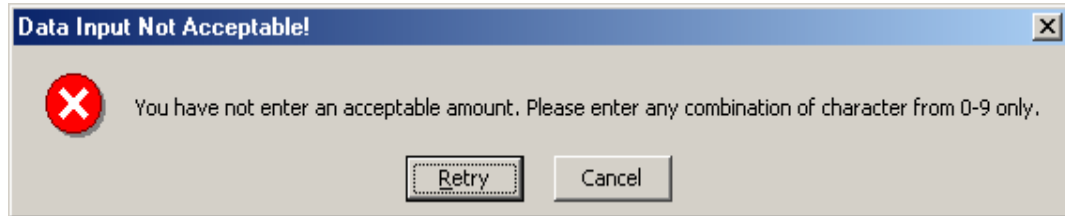


Figure 3.4: Data Input Not Acceptable

## 3.4 The Budgets and Forecasted Statements

There are an actual previous quarter balance sheet, seven budgets, two forecasted statements and a quarter summary.

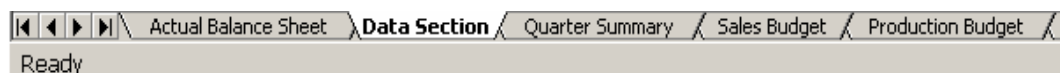


Figure 3.5: Some of the sheets

ZaSports Ltd.						
View Budgets		View Charts		Data Section		Help
Sales Budget						
	July		August		September	
	Product A	Product B	Product A	Product B	Product A	Product B
Sales	3190	1925	3300	2090	3080	2200
Selling Price	\$10.00	\$6.00	\$10.00	\$6.00	\$10.00	\$6.00
Budgeted Sales	\$31,900.00	\$11,550.00	\$33,000.00	\$12,540.00	\$30,800.00	\$13,200.00

Figure 3.6: Sales Budget – one of the budgets

### Grouping

A feature named grouping is used in some of the budgets to group up a group of rows. This feature let users to choose whether want to view the whole details of each items or just to view the total amount.

<b>Receipts:</b>			
<b>Sales</b>			
In the month	\$8,690.00	\$9,108.00	\$8,800.00
Following month	\$16,700.00	\$21,725.00	\$22,770.00
Second following month	\$8,400.00	\$10,020.00	\$13,035.00
<b>Total Receipts</b>	<b>\$42,021.00</b>	<b>\$42,940.78</b>	<b>\$45,325.33</b>
<b>Payments:</b>			
<b>Purchase of Materials</b>			
In the month	\$3,287.93	\$2,733.23	\$2,857.80
Following month	\$4,440.00	\$7,671.83	\$6,377.53
Total Payment for purchases	\$7,727.93	\$10,405.05	\$9,235.33
<b>Wages</b>	<b>\$6,857.00</b>	<b>\$6,670.40</b>	<b>\$6,626.40</b>
<b>Factory Overhead</b>	<b>\$11,175.80</b>	<b>\$10,868.00</b>	<b>\$10,791.00</b>
<b>Selling and Administration</b>	<b>\$12,000.00</b>	<b>\$12,000.00</b>	<b>\$12,000.00</b>
<b>Sales Commissions</b>	<b>\$2,172.50</b>	<b>\$2,277.00</b>	<b>\$2,200.00</b>
<b>Total Payments</b>	<b>\$39,933.23</b>	<b>\$42,220.45</b>	<b>\$40,852.73</b>
<b>Closing Balance</b>	<b>\$2,087.78</b>	<b>\$720.33</b>	<b>\$4,472.60</b>

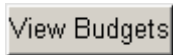
<b>Receipts:</b>			
<b>Sales</b>			
<b>Total Receipts</b>	<b>\$42,021.00</b>	<b>\$42,940.78</b>	<b>\$45,325.33</b>
<b>Payments:</b>			
<b>Total Payments</b>	<b>\$39,933.23</b>	<b>\$42,220.45</b>	<b>\$40,852.73</b>
<b>Closing Balance</b>	<b>\$2,087.78</b>	<b>\$720.33</b>	<b>\$4,472.60</b>

Figure 3.7: Before grouping

Figure 3.8: After grouping

### 3.4 The Buttons

There are five click able buttons can be found in this template.



View Budgets button is a short cut for user to view any of the budgets immediately after clicking it.

A Select the budget you want to view box will appeared with all of the sheets' name. Users only need to click the budget they want to view and the budget will change immediately.

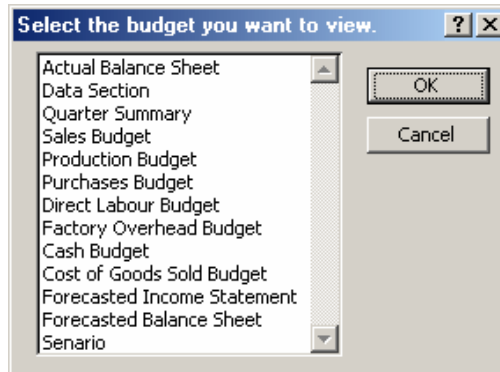


Figure 3.9: Select the budget you want to view



View Charts button is for user to view the charts of every budgets being prepared. The charts prepared are based on the budgets being prepared, if there are any changes in the budgets, the charts will be updated automatically according to the new figure.

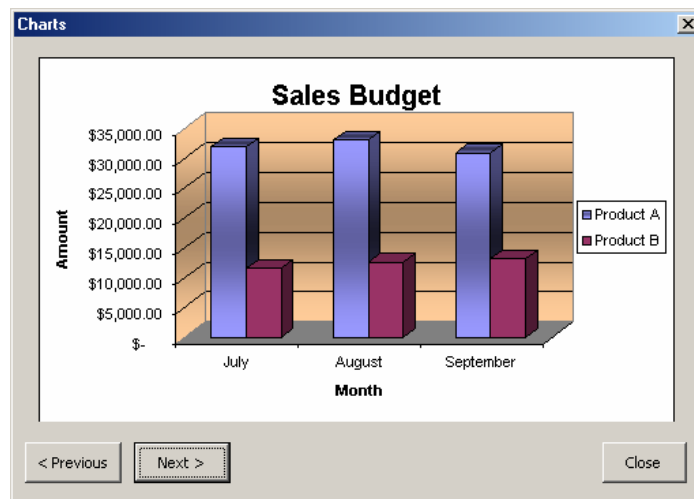
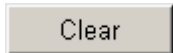

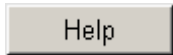


Figure 3.10: Charts

-  Clear button is for users to clear the form entirely. However, users are being noted that this process cannot be undoing.
-  Data Section button is for users to go back to Data Input Section to enter new data or change existing data.
-  Help button is for users to get help. Few topics are included in the help section.

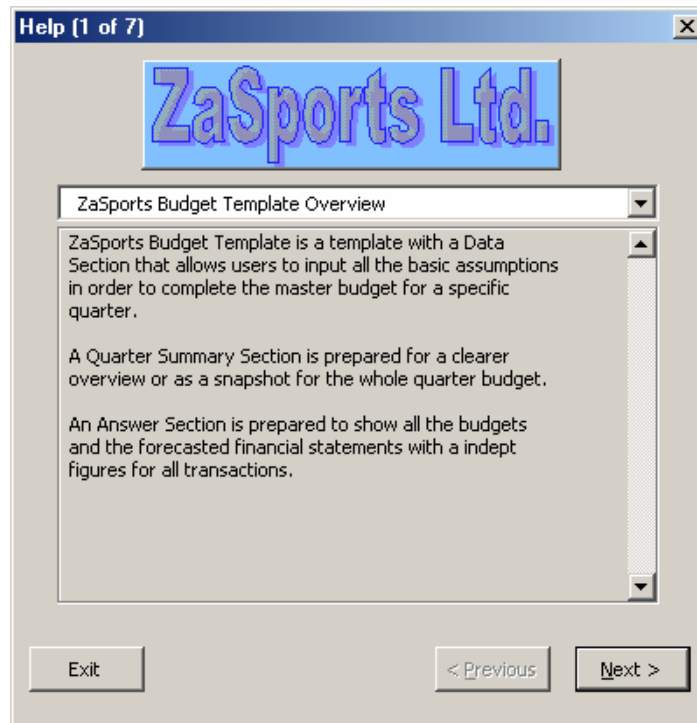


Figure 3.11: Help

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