

COMPUTER SCIENCE

PRACTICAL GUIDE ENGLISH MEDIUM



INSTRUCTIONS FOR THE CONDUCT OF PRACTICAL CLASSES & EXAMINATION :

12 Exercises from StarOffice and 12 from C++ are practiced in the practical classes.

The Question paper will have two sections A and B.

Section A : One question from StarOffice with Internal Choice.

Section B : One question from C++ with Internal Choice.

Distribution of Marks :

Internal Assessment :	20 Marks
<i>Sessional Marks for Class Lab Works</i>	<i>15 Marks</i>
Attendance	5 Marks
Observation & Performance of the periodical test	10 Marks
<i>Record Book</i>	<i>5 Marks</i>
External Assessment :	30 Marks
<i>StarOffice</i>	<i>15 Marks</i>
Procedure	10 Marks
Execution	5 Marks
<i>C++</i>	<i>15 Marks</i>
Procedure	10 Marks
Execution	5 Marks

Total Marks : 50 Marks

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1. TEXT EDITING AND FORMATTING

AIM:

To create a text document and perform the editing options like cut, copy, paste, find and replace, correcting typographical mistakes using auto correct option and the formatting options like font and color changing, paragraph alignments and adding bullets or numbered lists.

PROCEDURE:

I. Entering the given text:

1. Invoke StarOffice Writer using **Start → All Programs → StarOffice 8 → StarOffice Writer.**
2. Type the following text:

Heaven from all creatures hides the book of fate.

All but the page prescribe the present state.

A hero perishes or a sparrow fall.

II. Moving the text:

1. Select the text to be moved to a new location.
2. Select **Edit → Cut** or press **Ctrl + X**.
3. Move the insertion point to the required location where the text is to be pasted.
4. Select **Edit → Paste** or press **Ctrl + V**.

III. Copying the text:

1. Select the text to be copied.
2. Select **Edit → Copy** or press **Ctrl + C**.
3. Move the insertion point to the required location where the text is to be pasted.
4. Select **Edit → Paste** or press **Ctrl + V**.

IV. Finding and replacing text:

1. Choose **Edit → Find & Replace**, the Find & Replace dialog box appears on the screen.
2. Type the word “**Heaven**” in the Search for text box and “**God**” in the Replace with text box.
3. Click Find button, then click **Replace [or Replace All]** button.
4. Click Close button.

V. Changing the Fonts and Color:

1. Select the text and choose **Format → Character**, the Character dialog box appears on the screen.
2. Choose the required font and click **OK** button.
3. Select the text to be colored and click on Font Color icon that displays a color palette, to click the required color.

VI. Paragraph alignment:

1. Place the insertion point in the first line.
2. Click the required left or right or center or justify icons. (Or press **Ctrl + L**, **Ctrl + R**, **Ctrl + E**, **Ctrl + J** respectively.)

VII. Creating Bullets or Numbered Lists:

1. Place the insertion point in the second line.
2. Click the Bullets or Numbering icon on the formatting toolbar.

VIII. Correcting typographical mistakes:

1. Select **Tools → AutoCorrect**, the AutoCorrect dialog box appears on the screen and click Replace tab.
2. Type the word to be replaced is in the Replace text box and the replacement word is in the With text box.

3. Click New and then **OK** button.

Output:

Heaven from all Creatures hides the book of fate

All but the Page Prescribe the Present State

A hero perishes or a sparrow fall.

Cut

All but the Page Prescribe the Present State

A hero perishes or a sparrow fall.

Paste

Heaven from all Creatures hides the book of fate

Copy

Heaven from all Creatures hides the book of fate

All but the Page Prescribe the Present State

A hero perishes or a sparrow fall.

Paste

Heaven from all Creatures hides the book of fate

Search

Heaven from all Creatures hides the book of fate

All but the Page Prescribe the Present State

A hero perishes or a sparrow fall.

Replace

God from all Creatures hides the book of fate

All but the Page Prescribe the Present State

A hero perishes or a sparrow fall.

CONCLUSION:

The text editing and formatting options are done successfully.

2. PAGE FORMATTING

AIM:

To change the margin settings, page orientation and insert header and footer.

PROCEDURE:

I. Entering the text:

1. Invoke StarOffice Writer using **Start → All Programs → StarOffice 8 → StarOffice Writer**.

2. Type the following text:

The margins for a particular page can be set to an exact value using a Page Style dialog box or approximately using Rulers. Header and Footer are some references remarks added to at every page of the document of the top and bottom margins respectively.

II. Changing the margins:

1. Click **Format → Page**, the Page Style dialog box appears on the screen.
2. Click the Page tab, type **0.5** inches in Left and Right spin boxes under Margins group and click on OK button.
3. To change the margins to original settings, place the mouse pointer between the grey and white area of the ruler. It becomes double headed arrow, now click and drag to a new margin.

III. Changing page orientation:

1. In Page Style dialog box, click the Page tab.
2. In the Orientation area, select the portrait or landscape option button and click on OK button.

IV. Creating a Header and Footer:

1. Click **Format → Page**, the Page Style dialog box appeared on the screen.
2. Select the **Header** tab and click the **Header on** checkbox.
3. Select the **Footer** tab and click the **Footer on** checkbox.
3. Now click **OK** button.
4. Click inside the header area and type the text Page Formatting as topic name.
5. Click inside the footer area and choose **Insert → Fields → Page Number** to insert page numbers on every page.

Output:

Page Formatting Header

**Heaven from all Creatures hides the book of fate
All but the Page Prescribe the Present State
A hero perishes or a sparrow fall.**

Page No : 1 Footer

CONCLUSION:

The margin settings, page orientation are changed and header and footer are created

successfully.

3. TABLE CREATION

AIM:

To prepare students mark list using table

PROCEDURE:

I. Creating Table:

1. Invoke StarOffice Writer using **Start → All Programs → StarOffice 8 → StarOffice Writer**.
2. Select **Table → Insert → Table** option that displays Insert Table dialog box.
3. Type the table name as Mark list in Name text box, number of columns as 4 in Columns spin box and number of rows as 6 in Rows spin box.
4. Click **OK** button.
5. Enter the names of five students and marks in three subjects.

II. Changing the table borders, line style and background:

1. Select the table or the require cell or cell range.
2. Click **Table → Table Properties**, the Table Format dialog box appears on the screen.
3. Select the Borders tab and choose the desired borders and line styles.
4. Select the Background tab and choose the desired back colour.
5. Click on **OK** button.

III. Adding rows:

1. Place the insertion point to the last row of the table and choose **Table → Insert → Rows**.
2. In Insert Rows dialog box, type 2 in Amount spin box and choose After option in Position area and then click on OK button.
3. Enter two students mark details in the last added rows.

Output:

STUDENT NAME	TAMIL	ENGLISH	COMPUTER	TOTAL
ANBU	150	160	180	490
ANAND	160	167	174	501
GURU	169	145	178	492
SIVA	170	176	190	536

MANI	160	180	200	540
-------------	------------	------------	------------	------------

CONCLUSION:

The students mark list is successfully created using table.

4. MARK LIST

AIM:

To prepare a mark list and find the total marks, average and the class average for each subject using spreadsheet.

PROCEDURE:

1. Invoke StarOffice Calc by clicking on **Start→All Programs → StarOffice8→ StarOfficeCalc**.
2. Type the following details:
3. Place the cell pointer in E2, type the formula **=SUM (B2 : D2)**. To copy it to other cells using Fill command, select the cell range **E2 : E6** and click on **Edit → Fill → Down**.
4. Place the cell pointer in F2, type the formula **=AVERAGE (B2 : D2)**. To copy it to other cells using Fill command, select the cell range **F2 : F6** and click on **Edit → Fill→Down**.
5. Place the cell pointer in B7, type the formula **=AVERAGE (B2 : B6)**. To copy it to other cells using Fill command, select the cell range **B7 : D7** and click on **Edit →Fill →Right**.

Output :

STUDENT NAME	TAMIL	ENGLISH	COMPUTER	TOTAL	AVERAGE
ANBU	150	160	180	490	163.33
ANAND	160	167	174	501	167
GURU	169	145	178	492	164
SIVA	170	176	190	536	178.67
MANI	160	180	200	540	180
AVERAGE	161.8	165.6	184.4		

CONCLUSION:

The mark list is prepared and found total marks, average and the class average.

5. PAY BILL

AIM:

To prepare a pay bill, show the variations of basic pay of the employees using a chart.

PROCEDURE:

I. Entering the employee details:

1. Invoke StarOffice Calc by clicking on **Start**→**All Programs** → **StarOffice8**→**StarOfficeCalc**.
2. Type the following details:
3. Calculate the Gross pay by entering the formula = **Sum (C2 : F2)** in the cell G2. To copy the gross pay to other row, select G2 to G6. Click on **Edit** → **Fill** → **Down**.

II. Changing the row height and column width:

1. Select the row whose height is to be changed and click **Format**→ **Row** → **Height** that displays Row Height dialog box. Type the new height in Height spin box and click on the **Ok** button.
2. Select the column whose width is to be changed and click **Format**→ **Column**→ **Width** that displays Column Width dialog box. Type the new width in Width spin box and click on the **Ok** button.

III. Sorting the records:

1. Select the entire details of the employees from A1 to G6.
2. Click on **Data**→**Sort**, select the Emp. Name in the Sort by option. Click Ascending option button and OK button.

IV. Adding and deleting the records:

1. Move the cell pointer to the end of the records and type two new records.
2. Select the row to be deleted, choose **Edit** → **Delete Cells** option that displays Delete Cells dialog box.
3. Select **Delete entire row(s)** option and click **OK** button.

V. Creating a chart:

1. Select the cell range B1 to C7 and choose **Insert** → **Chart** that displays **Auto Format Chart** dialog box, click on **Next** button.
2. Choose the pie chart in Choose a chart type and click Columns radio button in Data Series in area then click **Next** button.
3. Choose a desired type of chart in the Choose a variant option, again click on **Next** button.
4. Type **Employee Pay Details** in Chart Title text box and click on **Create** button.

Output:

Emp No	Emp Name	Basic Pay	DA	CCA	HRA	Gross Pay
1001	Anand	5800	300	300	400	6800
1002	Bala	5000	350	300	450	6100
1003	David	6000	350	450	500	7300
1004	Hari	6500	350	450	450	7750
1005	Employee Salary			00	600	8500

■ Anand ■ Bala ■ David ■ Hari ■ Gopi

CONCLUSION:

The pay bill is successfully prepared and displayed the variations of basic pay in a chart.

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6. SERIES GENERATION

AIM:

To generate the given series of date and numbers using StarOffice Calc.

PROCEDURE:

1. Invoke StarOffice Calc by clicking on **Start→All Programs→StarOffice8→StarOffice Calc.**

I. Generating the series 3/5/00, 3/12/00, 3/19/00....., 5/28/00

1. Click on the column heading A.
2. Choose **Edit → Fill → Series** that displays **Fill Series** dialog box, select **Down as Direction, Date as Type and Day as Time unit.**
3. Type **3/5/00** as **Start value** and **5/28/00** as **End value** and **7** as **Increment**, and then click on **OK** button.

II. Generating the series 16, 32, 64, 128, 2048:

1. Click on the column heading B.
2. Choose **Edit→ Fill→ Series** option that displays **Fill Series** dialog box, select **Down as Direction** and **Growth as Type.**
3. Type the value **16** as **Start value**, **2048** as **End value** and **2** as **increment**, and then click on **OK** button.

III. Generating the series 33, 30, 27....., 3:

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1. Click on the column heading C.
2. Choose Edit → Fill → Series option that displays **Fill Series** dialog box, select **Down** as **Direction** and **Linear** as **Type**.
3. Type the value **33** as **Start value**, **3** as **End value** and **-3** as **increment**, and then click on **OK** button.

Output:

Date	Number Series	
03/05/2016	16	33
03/12/2016	32	30
03/19/2016	64	27
03/26/2016	128	24
04/02/2016	256	21
04/09/2016	512	18
04/16/2016	1024	15
04/23/2016	2048	12
04/30/2016		9
05/07/2016		6
05/14/2016		3
05/21/2016		
05/28/2016		

CONCLUSION:

The given series are generated successfully.

7. STUDENTS DETAILS

AIM:


To list the students details aged 18 and above.

PROCEDURE:

I. Creating database table:


1. Invoke StarOffice Base by clicking on **Start → All Programs → StarOffice 8 → StarOffice Base**.
2. Select the require database from the **Database Wizard**.
3. Choose **Insert → Table Design**, the **Table Design** window appears on the screen.
4. Type the following table structure:
5. Right click on the small triangle to the left of the field **SNo** and choose **Primary Key**.
6. Press **Ctrl + S**, enter the table name as **Student_details** in the dialog box which appears on the screen.

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	Field Name	Field Type	Description
	SNo	Number [NUMERIC]	Serial Number
	Name	Text [VARCHAR]	Name of the student
	Age	Number [NUMERIC]	Age of the student
	Gender	Text [VARCHAR]	Gender of the student

II. Adding the records:

1. Select **Student_details** on the **Table** pane and then choose **Edit → Open Database Object**.
2. Now enter the following data:
3. Save the data by pressing **Ctrl + S**.

	SNo	Name	Age	Gender
	1	Ananth J	25	Male
	2	Sumitha P	8	Female
	3	Vignesh P	14	Male
	4	Raja G	29	Male
	5	Lakshmi A	17	Female
	6	Baskaran V	30	Male
	7	Shobana M	11	Female
	8	Karthick M	21	Male
	9	Malliga A	40	Female
	10	Azhaguraj M	45	Male
				

III. Filtering the records :

1. Click the **Standard Filter** icon on the toolbar that displays **Standard Filter** window.
2. Choose **Age** as **Field Name**, **>=** as **Condition** and type **18** in **Value** text box.
3. Click on **OK** button.



OUTPUT

SNo	Name	Age	Gender
1	Ananth J	25	Male
4	Raja G	29	Male
6	Baskaran V	30	Male
8	Karthick M	21	Male
9	Malliga A	40	Female
10	Azhaguraj M	45	Male

CONCLUSION:

The details of students aged 18 and above are listed successfully.

8. FORM DESIGNING

AIM:

To create a table and use it to design a form in StarOffice Base to view students marks.

PROCEDURE:

I. Creating database table:

1. Invoke StarOffice Base by clicking on **Start → All Programs → StarOffice 8 → StarOffice Base**.
2. Select the require database from the **Database Wizard**.
3. Choose **Insert → Table Design**, the **Table Design** window appears on the screen.
4. Type the following table structure:

Field Name	Field Type	Description
RegNo	Number [NUMERIC]	Register Number
Name	Text [VARCHAR]	Students Name
Tamil	Number [NUMERIC]	Tamil Mark
English	Number [NUMERIC]	English Mark
Maths	Number [NUMERIC]	Mathematics Mark
Science	Number [NUMERIC]	Science Mark
Social	Number [NUMERIC]	Social Science Mark
Total	Number [NUMERIC]	Total Mark
Average	Number [NUMERIC]	Average Mark

5. Right click on the small triangle to the left of the field **RegNo** and choose **Primary Key**.
6. Press **Ctrl + S**, enter the table name as **Mark list** in the dialog box which appears on the screen.

II. Adding two more fields:

1. Select the **Tables** option from <Database> pane and right click on the **Mark list** table, choose the **Edit** option from the submenu that appears.
2. In the **Table Design** window, type two more fields like **Result** and **Comment** of type **Text[VARCHAR]** and press **Ctrl + S** to save the modification.

III. Adding records:

1. Select **Mark list** on the **Table** pane and then choose **Edit → Open Database Object**.
2. Now enter the data into the table. After completing, save again.

OUTPUT:

Field	Value
RegNo	21005
Name	Anand J
Tamil	74
English	72
Maths	100
Science	65
Social Science	60
Total	371
Average	74
Result	Pass
Comment	A

IV. Form Designing:

1. Select **Forms** icon in <Database> pane and then select **Use Wizard to Create Form** that appears **Form Wizard** window on the screen.
2. Select **Mark list** table and choose all fields in the **Available Fields** text area. Click **Next** button for two times.
3. In the **Data Entry Mode** window, select **The form is to display all data** radio button and click

Next button.

4. Select the require form style from **Apply styles** box and then click **Next** button.
5. Type the name of the form as **Mark list_Form** and select the **Work with the form** radio button.
6. Now click on **Finish** button.

CONCLUSION:

The students Mark list form is successfully designed



9. SORTING RECORDS

AIM:

To create a database table and sort the records.

PROCEDURE:

I. Creating table:

1. Invoke StarOffice Base by clicking on **Start → All Programs → StarOffice 8 → StarOffice Base**.
2. Select the require database from the **Database Wizard**.
3. Choose **Insert → Table Design**, the **Table Design** window appears on the screen.
4. Type the following fields:

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Field Name	Field Type	Description
RegNo	Number [NUMERIC]	Register Number
Name	Text [VARCHAR]	Students Name
Tamil	Number [NUMERIC]	Tamil Mark
English	Number [NUMERIC]	English Mark
Maths	Number [NUMERIC]	Mathematics Mark
Science	Number [NUMERIC]	Science Mark
Social	Number [NUMERIC]	Social Science Mark
Total	Number [NUMERIC]	Total Mark
Average	Number [NUMERIC]	Average Mark

5. Right click on the small triangle to the left of the field **RegNo** and choose **Primary Key**.
6. Press **Ctrl + S**, enter the table name as **Marklist** in the dialog box which appears on the screen.

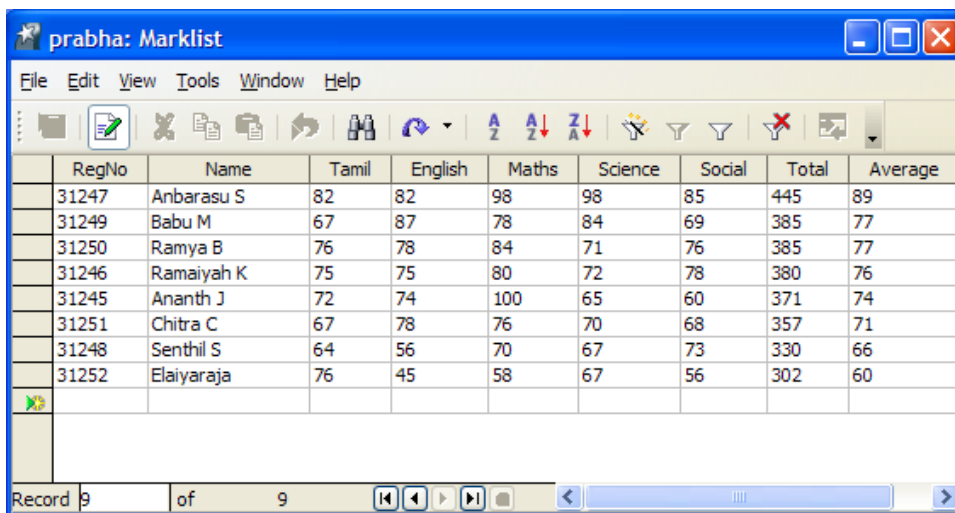
II. Adding records:

1. Select **Marklist** on the **Table** pane and then choose **Edit → Open Database Object**.
2. Now enter the data into the table. After completing, press **Ctrl + S** to save the table.

III. Sorting the records:

In the **Marklist Table** window, select the **Total** field by clicking on it at the top of the table. Then click on either the **Sort Ascending** icon or **Sort Descending** icon.

OUTPUT :



RegNo	Name	Tamil	English	Maths	Science	Social	Total	Average
31247	Anbarasu S	82	82	98	98	85	445	89
31249	Babu M	67	87	78	84	69	385	77
31250	Ramya B	76	78	84	71	76	385	77
31246	Ramayah K	75	75	80	72	78	380	76
31245	Ananth J	72	74	100	65	60	371	74
31251	Chitra C	67	78	76	70	68	357	71
31248	Senthil S	64	56	70	67	73	330	66
31252	Elaiyaraja	76	45	58	67	56	302	60

CONCLUSION:

The database records are sorted.

10. MY SCHOOL

AIM:

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To create a presentation about my school in five slides and changes the background and fonts.

PROCEDURE:

I. Creating presentation:

1. Click on **Start** → **All Programs** → **StarOffice 8** → **StarOffice Impress** that displays **Presentation Wizard**.
2. Select **Empty presentation** option in **Type** area and click on **Next** button.
3. Select a **slide design** and **output medium** in the second page of **Presentation Wizard** and then click on **Next** button.
4. In third page, choose **slide transition effect** and **presentation type** and then click on **Create** button.
5. Choose a layout in **StarOffice Impress Presentation Window** and type about your school.

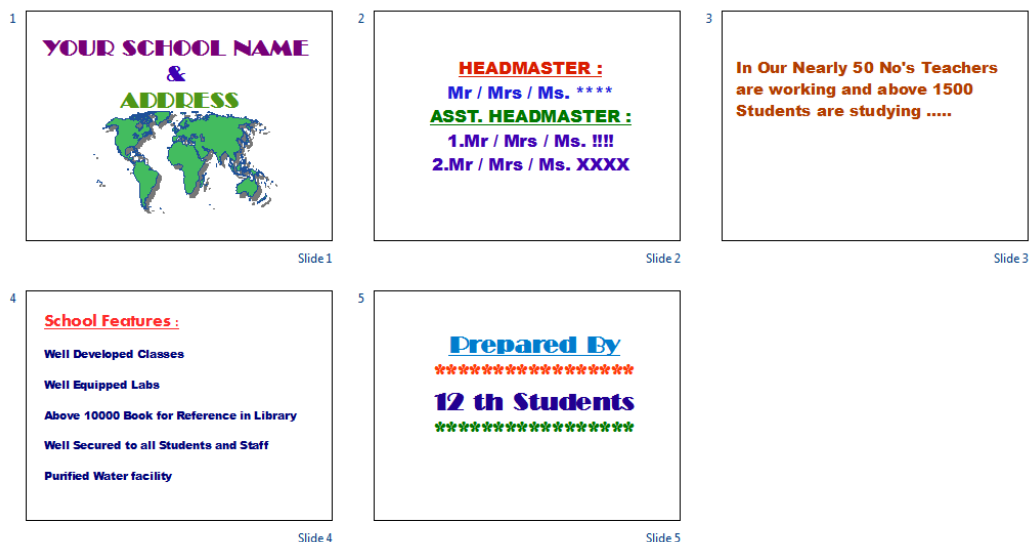
II. Inserting Slides:

1. Choose **Insert** → **Slide**, if want a new layout; choose it from **Layouts** page in **Tasks** pane.
2. Type the content about your school.
3. Use the above steps (1) and (2) for three times.

III. Changing Slide Background and Fonts:

1. Choose **Format** → **Page** that displays **Page Setup** dialog box, select the **Background** tab.
2. Select the require background fill options from **Fill** combo box and select the required background in the list and then click **OK** button.
3. To change background fill for all slides, click **Yes** button on the **Page Settings** dialog box that appears.
4. Select the required contents and click **Format** → **Character**, choose **Font** tab in **Character** dialog box.
5. Select the required fonts and click **OK** button.
6. Press **F5** to run the slide show.

OUTPUT:



CONCLUSION:

The presentation about my school is prepared and changed the background and fonts.

11. PRESENTATION USING TEMPLATES

AIM:

To create a presentation using templates and list the StarOffice functions in bullets.

PROCEDURE:

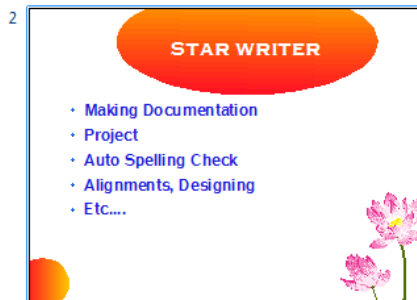
I. Creating presentation:

1. In StarOffice window, select **File** → **New** → **Templates and Documents** that displays **Templates and Documents** dialog box.
2. Double click on **Education** under **Templates** icon and then select **Academic Presentation**.
3. Now click **Open** button.
4. Select all the nine slides except the **second slide** in the **Slide Sorter** view and press the **Delete** key.
5. In the remaining slide, type the heading as **STAROFFICE FUNCTIONS** and below the heading section types the StarOffice functions one by one.
6. Save the presentation by clicking on **File** → **Save** and press **F5** to run the slide show.

OUTPUT :



Slide 1



Slide 2



Slide 3



Slide 4



Slide 5

CONCLUSION:

The presentation is prepared using templates and listed the StarOffice functions.



12. DAYS OF A WEEK

AIM:

To sort and display week days in a presentation and add appropriate pictures and sound.

PROCEDURE:

I. Creating presentation:

1. Click on **Start** → **All Programs** → **StarOffice 8** → **StarOffice Impress** that displays **Presentation Wizard**.
2. Select **Empty presentation** option in **Type** area and click on **Next** button.
3. Select a **slide design** and **output medium** in the second page of **Presentation Wizard** and then click on **Next** button.
4. In third page, choose **slide transition effect** and **presentation type** and then click on **Create** button.
5. Choose a layout in **StarOffice Impress Presentation Window** and type **Sunday** in the first slide.

II. Inserting Slides, Pictures and Sound:

1. Choose **Insert** → **Slide**, if want a new layout; choose it from **Layouts** page in **Tasks** pane.
2. Type **Monday**.
3. Click **Insert** → **Picture** → **From File** option that displays **Insert Picture** dialog box, choose the required picture.
4. Select **Insert** → **Movie and Sound**, choose the require file from the **Insert Movie and Sound** dialog box.

5. Repeat the above steps (1) to (5) up to all days.

III. Sorting the slides:

1. Click the **Slide Sorter view** tab to sort the slides.
2. Save and run the presentation slide show.

OUTPUT :



CONCLUSION:

The week days are displayed successfully and inserted the required picture and sound.

13. FIBONACCI SERIES

AIM:

To generate the Fibonacci series for n terms.

PROGRAM :

```
#include<iostream.h>
#include<conio.h>
void main ()
{
int i, n, f1, f2, f3;
clrscr ();
f1 = -1;
```

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```
f2 = 1;
cout<<"Enter the number of terms : ";
cin>>n;
cout<<"The Fibonacci series is\n";
for (i=1; i<=n; i++)
{
f3 = f1 + f2;
cout<<f3<<'\n';
f1 = f2;
f2 = f3;
}
getch ();
}
```

OUTPUT:

Enter the number of terms : 7
The Fibonacci series is
0
1
1
2
3
5
8

CONCLUSION:

The Fibonacci series is successfully generated.

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14. FACTORIAL NUMBER

AIM:

To find the factorial value of a given number.

PROGRAM:

```
#include<iostream.h>
#include<conio.h>
long int fact (int num)
{
long int a, f = 1;
for (a =1; a <= num; a++)
f *= a;
return f;
}
void main ()
{
int x;
clrscr ();
cout<<"Enter a number : ";
cin>>x;
cout<< "The factorial value of " <<x<<" is " <<fact(x);
getch ();
}
```

OUTPUT:

Enter a number : 5
The factorial value of 5 is 120

CONCLUSION:

The factorial value is found.



15. NUMBERS DISPLAY IN WORDS

AIM:

To display the given number in words by using switch structure.

PROGRAM:

```
# include<iostream.h>
# include<conio.h>
void main ()
{
int n;
clrscr ();
cout<<"Enter a number : ";
cin>>n;
switch (n)
{
case 1 :
cout<<"\nThe number is one";
break;
case 2 :
cout<< "\nThe number is two";
break;
case 3 :
cout<< "\nThe number is three";
break;
case 4 :
cout<< "\nThe number is four";
break;
case 5 :
cout<< "\nThe number is five";
break;
case 6 :
cout<< "\nThe number is six";
break;
case 7 :
cout<< "\nThe number is seven";
break;
case 8 :
cout<< "\nThe number is eight";
break;
case 9 :
cout<< "\nThe number is nine";
break;
```

```
default :  
cout<< "\nEnter the number between 1 and 9";  
}  
getch ();  
}
```

Enter a number : 5

The number is five

Enter a number : 17

Enter the number between 1 and 9

CONCLUSION:

The given number is successfully displayed in words.

16. PALINDROME

AIM:

To check whether the given string is palindrome or not.

PROGRAM;:

```
#include<iostream.h>  
#include<conio.h>  
#include<string.h>  
void main()  
{  
char str1[25],str2[25];  
clrscr();  
cout<<"Enter the string : ";  
cin>>str1;  
strcpy(str2, str1);  
strrev(str1);  
if (strcmp(str1,str2)==0)  
cout<<"The given string is palindrome";  
else  
cout<<"The given string is not palindrome";
```

```
getch();  
}
```

OUTPUT:

Enter the string :LIRIL

The given string is palindrome.

Enter the string : MRHILL

The given string is not palindrome



CONCLUSION:

The given string is checked.

17. ODD AND EVEN NUMBERS

AIM:

To find the number of odd numbers and even numbers in a given array.

PROGRAM;:

```
# include<iostream.h>  
# include<conio.h>  
void main ( )  
{  
int i, n, a[20], odd=0, even=0;  
clrscr ( );  
cout<<"Enter the number of array elements : ";  
cin>>n;  
cout<< "Enter the array values :\n";  
for (i = 0; i < n; i++)  
{  
cin>>a [i];  
if (a[i] % 2 == 0)  
even ++;  
else  
odd ++;  
}  
cout<< "Number of odd numbers : \t"<<odd;  
cout<< "\nNumber of even numbers : \t"<<even;
```

```
getch ();  
}
```

OUTPUT:

Enter the number of array elements : 5

Enter the array values :

34

23

56

67

78

Number of odd numbers : 2

Number of even numbers :

CONCLUSION:

The number of odd numbers and even numbers are found.

18. TRANSPOSE MATRIX

AIM:

To print the transpose of 3 x 3 matrix.

PROGRAM;:

```
# include<iostream.h>  
# include<conio.h>  
void main () {  
int i, j, matA[3][3];  
clrscr();  
cout<<"Enter the A matrix elements :\n";  
for (i = 0; i < 3; i++)  
for (j = 0; j < 3; j++)  
cin>>matA[i][j];  
cout<<"\n\nThe given A matrix is \n\n";  
for (i = 0; i < 3; i++) {  
for (j = 0; j < 3; j++)  
cout<<"\t"<<matA[i][j];
```

```
cout<<'\n';
}
cout<<"\n\nThe transpose matrix of A is \n";
for (i = 0; i < 3; i++) {
for (j = 0; j < 3; j++)
cout<<'\t'<<matA[j][i];
cout<<'\n';
}
getch();
}
```

OUTPUT:

Enter the A matrix elements :

1
2
3
7
8
9
4
5
6

The given A matrix is

1	2	3
7	8	9
4	5	6

The transpose matrix of A is

1	7	4
2	8	5
3	9	6



CONCLUSION:

The transpose matrix is successfully printed.

19. MATRIX ADDITION

AIM:

To add the given two 3 x 3 matrix.

PROGRAM;:

```
#include<iostream.h>
#include<conio.h>
void main ( )
{
int i, j, matrixA[3][3], matrixB[3][3], sum_matrix[3][3];
clrscr ( );
cout<<"Enter the A matrix elements : \n";
for (i = 0; i < 3; i++)
for (j = 0; j < 3; j++)
cin>> matrixA[i][j];
cout<<"\nEnter the B matrix elements : \n";
for (i = 0; i < 3; i++)
for (j = 0; j < 3; j++)
cin>> matrixB[i][j];
cout<<"\nAddition of the matrices A and B is \n";
for (i = 0; i < 3; i++)
{
for (j = 0; j < 3; j++)
{
sum_matrix[i][j] = matrixA[i][j] + matrixB[i][j];
cout<<sum_matrix[i][j]<<"\t";
}
cout<<"\n";
}
getch();
}
```

OUTPUT:

Enter the A matrix elements :

3
3
3
3
3
3
3
3
3
3



Enter the B matrix elements :

1
2
3
4
5
6
7
8
9

Addition of the matrixes A and B is

4 5 6
7 8 9
10 11 12

CONCLUSION:

The given two matrices are added successfully.

20. PRIME NUMBERS

AIM:

To determine whether the given number is prime or not.

PROGRAM:

```
#include<iostream.h>
#include<conio.h>
int prime (int n)
{
int i, p = 1;
for (i = 2; i <= n/2; i++)
if (n % i == 0)
p = 0;
return p;
}
void main ()
{
int x;
clrscr ();
cout<<"Enter a number : ";
```

```
cin>>x;
if (prime(x))
cout<<"\n\nThe given number "<<x<<" is prime";
else
cout<<"\n\nThe given number "<<x<<" is not prime";
getch ();
}
```

OUTPUT:

Enter a number : 6
The given number 6 is not prime
Enter a number : 11
The given number 11 is prime

CONCLUSION:

It is found whether the given number is prime or not.

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21. USES OF CLASSES

AIM:

To prepare employee details using class and objects.

PROGRAM;:

```
#include<iostream.h>
#include<conio.h>
class employee {
private:
```



```
int empno;
char ename[20];
float basic, hra, da, netpay;
float calculate()
{
return (basic + da + hra);
}
public:
void havedata()
{
cout<<"\n Enter the employee number : ";
cin>>empno;
cout<<"\n Enter the employee name : ";
cin>>ename;
cout<<"\n Enter the basic pay : ";
cin>>basic;
cout<<"\n Enter the HRA amount : ";
cin>>hra;
cout<<"\n Enter the DA amount : ";
cin>>da;
netpay = calculate ( );
}
void dispdata ( )
{
cout<<"\n\t\tEmployee Details\n";
cout<<"\n\t\t-----\n";
cout<<"\nEmployee number : "<<empno;
cout<<"\nEmployee name : "<<ename; cout<<"\nBasic pay : "<<basic;
cout<<"\nHRA : "<<hra;
cout<<"\nDA : "<<da;
cout<<"\nNetpay : "<<netpay;
}
};
void main()
{
clrscr();
employee emp;
emp.havedata();
emp.dispdata();
getch();
```

}

OUTPUT:

Enter the employee number : 101

Enter the employee name : Ramesh

Enter the basic pay : 30000

Enter the HRA amount : 1100

Enter the DA amount : 1000

Employee Details

Employee number : 101

Employee name : Ramesh

Basic pay : 30000

HRA : 1100

DA : 1000

Netpay : 32100



CONCLUSION:

The employee details are prepared using class.

22. FUNCTION OVERLOADING

AIM:

To find the maximum of two numbers and three numbers by using function overloading.

PROGRAM;:

```
#include<iostream.h>
#include<conio.h>
int max(int a, int b)
{
return ((a > b) ? a : b);
}
int max (int a, int b, int c)
{
int m;
m = (a > b) ? a : b;
m = (m > c) ? m : c;
```

```
return m;
}
void main ( )
{
int n1, n2, n3, ch;
clrscr();
cout<<"Choices :\n";
cout<<"\n\t1. Maximum of two numbers\n";
cout<<"\t2. Maximum of three numbers \n";
cout<<"\nEnter your choice : ";
cin>>ch;
switch (ch)
{
case 1:
cout<<"\nEnter the first number : ";
cin>>n1;
cout<<"Enter the second number : ";
cin>>n2;
cout<<"\nThe maximum number is : "<<max(n1,n2);
break;
case 2:
cout<<"\nEnter the first number : ";
cin>>n1;
cout<<"Enter the second number : ";
cin>>n2;
cout<<"Enter the third number : ";
cin>>n3;
cout<<"\nThe maximum number is : "<<max(n1,n2,n3);
}
getch();
}
```

OUTPUT:

Choices:

1. Maximum of two numbers
2. Maximum of three numbers.

Enter your choice : 2

Enter the first number : 5
Enter the second number : 25
Enter the third number : 12
The maximum number is: 25

Choices:

1. Maximum of two numbers
2. Maximum of three numbers.

Enter your choice : 1
Enter the first number : 51
Enter the second number : 325
The maximum number is: 325

CONCLUSION:

Maximum of two numbers and three numbers are found.

23. INHERITANCE

AIM:

To find the sum and difference of given numbers using inheritance.

PROGRAM;:

```
#include<iostream.h>
#include<conio.h>
#include<math.h>
class add
{
int sum;
protected:
int num1, num2;
public:
add()
{
sum=0;
}
void accept()
{
```



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```
cout<<"\nEnter two numbers \n";
cin>>num1>>num2;
}
void plus()
{
sum = num1+num2;
cout<<"The sum is : "<<sum;
}
};
class subtract : public add
{
int sub;
public:
subtract()
{
sub = 0;
}
void minus()
{
add::accept();
sub = abs(num1 - num2);
cout<<"The difference is : "<<sub;
}
};
void main()
{
int ch;
subtract s;
clrscr();
cout<<"Choices : \n";
cout<<"\n\t 1. Addition";
cout<<"\n\t 2. Difference\n";
cout<<"\nEnter your choice : ";
cin>>ch;
switch(ch)
{
case 1:
s.accept();
s.plus();
break;
```

```
case 2:  
s.minus();  
break;  
}  
getch();  
}
```

OUTPUT:

Choices :

1. Addition
2. Difference

Enter your choice : 1

Enter two numbers

57

21

The sum is : 78

Choices :

1. Addition
2. Difference

Enter your choice : 2

Enter two numbers

-5

5

The difference is 10

CONCLUSION:

The sum and difference are calculated successfully.



24. WORDS TRIANGLE

AIM:

To print the string in the given format.

C

CO

COM

COMP

COMPU

COMPUT

COMPUTE

COMPUTER

PROGRAM:

```
#include<string.h>
#include<iostream.h>
#include<conio.h>
void main()
{
int i, l;
clrscr();
char name[] ="COMPUTER";
i = 1;
l = strlen(name);
while ( i <= l )
{
cout. write (name, i);
cout<<'\n';
i ++;
}
getch ();
}
```



OUTPUT:

C
CO
COM
COMP
COMPU
COMPUT
COMPUTE
COMPUTER

CONCLUSION:

The string is printed in the given format.

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