Unit 1. THE WORLD OF DESIGNING
(Practical worksheets)

Worksheet 1

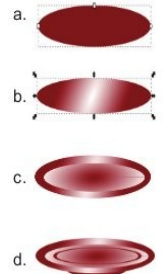Activity   : Creating banner – Drawing tea cup and saucer
Software : Inkscape Vector Graphics Editor
Time :   40 min.

a. Open Inkscape [Applications – Graphics – Inkscape Vector Graphics Editor]
b. File – Document properties – Resize page to content – select 'Resize page to Drawing or Selection' .
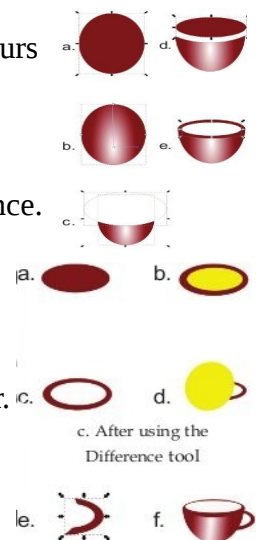c. **Drawing a saucer** .
   • Using the Create circle tool, draw an oval horizontally
   • Select the oval – Object – Fill and Stroke – click on the Radial Gradient –
     Give suitable colours to the object by selecting each node
   • Edit – Duplicate – to make the copy smaller proportionately, press Ctrl+Shift keys.
   • Create more copies of ovals to get a form of saucer.
     (to arrange the oval to the bottom, choose Object – Lower to Bottom)
   • To group them, select all, Object – Group
d. **Drawing the tea cup**.
   • Using the Create circle tool, draw an oval vertically – Give suitable gradient colours
   • Draw another oval on the top of the first oval, Select both, Path – Difference
   • To group them, select all, Object – Group
   • To draw the edge of cup, Draw two circles as shown in the figure, Select both,
     Path – Difference. Draw another circle over the first, Select both, Path – Difference.
   • Place this edge on the side of tea cup, Select both, Path – Union.
   • To get the effect of filled tea, draw an oval inside the mouth of cup and give
     suitable colour.
e. **Steaming tea effect**
   • Using the Calligraphic brush tool, draw three vertical lines,Select and give colour.
   • To modify the colour, use the Blur tool in the Fill and Stroke window.
   • Select the saucer, tea cup and steam,   Object – Group
f. Save in your folder.

Worksheet 2

Activity   : Creating banner – Adding text and logo with the tea cup and saucer
Software : Inkscape Vector Graphics Editor
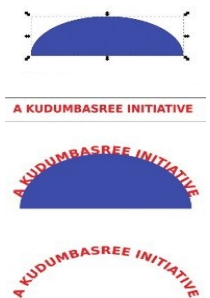Time :   40 min.

a. Open the saved Inkscape file [Applications – Graphics – Inkscape Vector Graphics Editor – File --Open]
b. **Making a logo** "Taste the Real Taste of Nature"
   • Draw a rectangle and fill green colour
   • Using the Create and Text object tool, type 'Taste the Real Taste of Nature'
     in black colour – Select the text and choose Bold instead of Normal –
     Take a duplicate of logo and give lime colour and shade
   • Drag the logo text in to the green rectangle box.
c. **Drawing a curved text** "A KUDUMBASREE INITIATIVE"
   • Draw a semi-circle
   • Using the Create and Text object tool, type 'A KUDUMBASREE INITIATIVE'
   • Select both the circle and the text, Text – Put on path – (arrange the curved text
     suitably)
   • Select the semi-circle only and eliminate its colour using the Fill and Stroke tool.
d. Arrange the logo on the lower side of tea cup and saucer and the
   curved text over it – Group all.
f. File – Import – (a suitable background picture) – select 'embed' – OK

Class X ICT - **Unit 2 – PUBLISHING**
(Practical worksheets)

CONTENT
1 * Use of Clone formatting tool, Applying Default style and Modifying Style
2 * Creating and applying New style
3 * Preparation of an Index Table in pdf.
4 * Mail Merge: Preparation of invitation letter for parents
5 * Mail Merge:Making Participant cards.

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1. Use of Clone formatting tool, Applying Default style & Modifying Style

a). Home -School Resources - Standard 10 -- open the file, **School report . Ott**

b). Select 'ആമുഖം' -- format – character – [font :Meera, font size : 16 pt, font effect : blue colour,
   shadow] –OK

c). To apply this format, Double click the ![brush icon] (**clone formatting tool)** --- drag over the desired
   headings.

d). To apply any Default Style, select the headings/subheadings – choose a style from Default Style box.

e). Styles and formatting – select and right click on Heading1 – Modify
   [**Font** - font : Meera, size : 150%, **Font effects** - font colour : Blue, Outline, Shadow,
    Alignment - center]   Apply -- OK

f). Save to your folder.

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2. Creating and applying New style

a). To create a new style named " Main Heading",
   Open the School report . Ott (from Home - School Resources) -- Format – Styles and formatting --
   select and right click on Heading – New
      [**Organizer** – give style name as "Main Heading", **Font** - font : Meera, size : 20 pt, style : Bold,
      Font effects - font colour : Blue, **Alignment** - center]   Apply -- OK

b). To apply your new style (ie, " Main Heading"), select the appropriate headings/subheadings -- choose
   your style from Default Style box.

c). To create a new style named " Paragraph_1",   -- Format – Styles and formatting -- select and right click
   on Heading – New
      [**Organizer** – give style name as "Paragraph_1", **Font** - font : Suruma, size : 13 pt, style : Regular,
      Font effects - font colour : Black,   Indents & Spacing – First line indent : 2.00 cm,   Line spacing :
      1.5 lines]   Apply -- OK

d). To apply your new style (ie, " Paragraph_1"), select the appropriate headings/subheadings -- choose
   your style from Default Style box.

e). * To give a **header** ("School Report 2017") to this page, Insert – Header – Default Style –type "School
      Report 2017" (give appropriate colour, size etc. and align at centre)
   * To give "number" as **Footer**, Insert – Fields – Page number – type 1 and align at centre)
   * To give page **border**, Format – Page – Border – click on full border.
      Apply -- OK

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3. Preparation of an Index Table in pdf.

a). Open the School report . Ott (from Home - School Resources) – point the cursor (mouse point) just before
   the 'ആമുഖം' --- Insert – Indexes and Tables – Index/Table – type a title as "Content" -- OK.
   Press the ctrl key and click on the content list in the report.

b). To format the Index Table,
   Rt click on the Index Table -- Edit index or table – (remove the tick mark from Protected against
   manual changes) – OK
   Now you can change the font colour, size etc by selecting each.

c). To make this file to a pdf format file,
   File – Export as pdf.

4. Mail Merge: Preparation of invitation letter for parents

      (the two files that we need are **letter . Odt** and **address . Ods**)

a). Home -School Resources - Standard 10 -- open the file, **letter . Odt**

b). Insert – Fields --More fields – Database --- Mail merge --click on Brows -- (Home -School Resources - Standard 10 – open the file **address . Ods**)

c). Double click on **adress** to open and list the address sheet
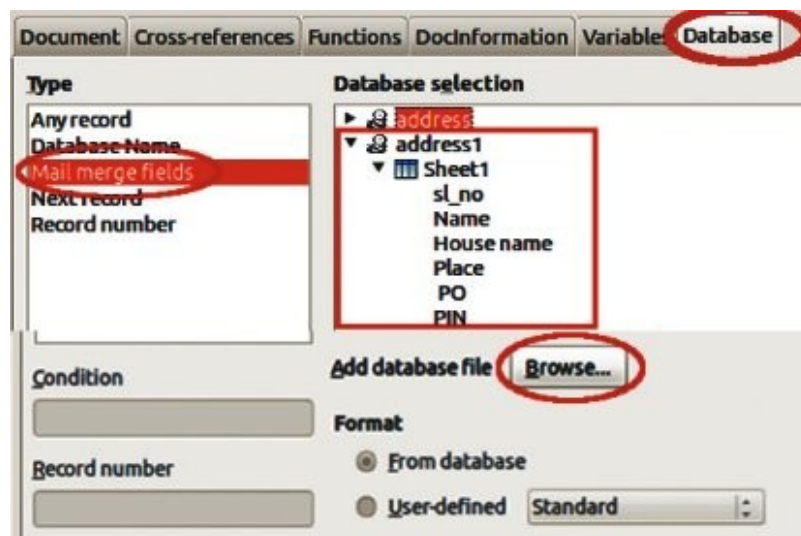
    * Keep the mouse cursor after "Dear" and double click on **Name** in the address field.

    * Keep the mouse cursor after "To" and double click on **Name, House name, Street name, Postoffice** and **Pincode** in the address field.

d) File – Print – (yes) – (select the **File** option, instead of **Printer** option) -- Click on OK – Save the file giving a name.

    Now invitation letters for parents are ready (Open the saved file to view the same)

5. Mail Merge:Making Participant cards.

      (the two files that we need are **card . Odt** and p**articipants . Ods**)

a). Home -School Resources - Standard 10 -- open the file, **card . Odt**

b). Insert – Felds --More felds – click on Brows -- (Home -School Resources - Standard 10 – open the file p**articipants . Ods**)

c). From the fields window, select Database --- Mail merge fields -- Double click on **participants** to open and list the participants sheet

    * Keep the mouse cursor after "Name" and double click on **Name** in the participants field.

    * Keep the mouse cursor after "Class" and double click on **class** , and cursor after "Item" and double click on **item1, Item2, Item3** etc.

d). Double click on Next record and repeat the above steps in next participant cards and close the window.

e). File – Print – (yes) – Click on OK – Save the file.

    Now participant cards are ready (Open the saved file to view the same)

Unit 3. ATTRACTIVE WEB DESIGNING
(Practical worksheets)

Worksheet 1

Activity : Web page designing – Adding Cascading Styles
Software : Text Editor (g edit)
Time : 40 min.

a. Open Text Editor [Applications – Accessories – Text Editor]
b. Type the following html tags ,

```
<html> <head>
<title>School Kalolsavam</title>
</head>
<body>
<h3>Single Items</h3>
<p>
Mohiniyattam<br>
Bharathanatyam
</p>
<h3>Group Items</h3>
<p>
oppana<br>
thiruvathira
</p> </body> </html>
```

c. Save (eg: My web page.html) and open the
   saved file to view the page.

d. To add Cascading style to paragraph tag,
   open the file in Text Editor and insert the
   following CSS style code,
   after the </title> tag

```
<style>
P
{
font-family:Liberation Sans;
color:#401d9a;
font-size:20px;
}
</style>
```

e. Save again and open it to view the change
f. To see a change in the CSS code,
   use the following codes as style

```
{
font-family:Verdana;
color:#ff00ff;
font-size:24px;
}
```

Worksheet 2

Activity : Web page designing – Using Class selectors, Modifying background colour
Software : Text Editor (g edit)
Time : 40 min.

a. Open Text Editor and open the saved file (eg: My web page.html)
b. Type the following codes for class selectors (red and blue) with in the style tags

```
P .red
{
font-family:Liberation Sans;
color:#ff0000;
font-size:20px;
}
P .blue
{
font-family:Liberation Sans;
color:#0000ff;
font-size:20px;
}
```
c. Save the file and open to view the modification.

d. To modify the background colour,
   use the following CSS codes with
   in the style tags.

```
body
{
background:#dof2f8
}
```

e. Save the file and open to view the
   new page colour.

Unit 4. PYTHON GRAPHICS
(Practical worksheets)

Worksheet 1

Activity   : Creating geometric shapes
Software : IDLE using python 3.4
Time :   40 min.

a. Open IDLE for python [Applications – IDLE using python 3.4 – File – New]
b. Type the following commands, save (eg: Shapes.py) and Run Module(F5) to get the inputs.
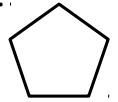
1. from turtle import*
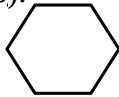   for I in range(3):
   forward(100)
   right(120)

2. from turtle import*
   for I in range(4):
   forward(100)
   right(90)

3. from turtle import*
   for I in range(5):
   forward(100)
   right(72)

4. from turtle import*
   for I in range(6):
   forward(100)
   right(60)

Worksheet 2

Activity   : Creating geometric patterns
Software : IDLE using python 3.4
Time :   40 min.

a. Open IDLE for python [Applications – IDLE using python 3.4 – File – New]
b. Type the following commands, save (eg: Patterns.py) and Run Module(F5) to get the inputs.

1. from turtle import*
   clear()
   pensize(3)
   for i in range(6):
   right(60)
   color("blue")
   for j in range(4):
   forward(100)
   right(90)

2. from turtle import*
   clear()
   pensize(3)
   clr=["blue","brown","red","green","orange","purple"]
   for i in clr:
   right(60)
   color(i)
   for j in range(4):
   forward(100)
   right(90)
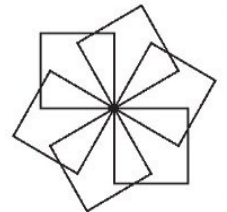
3. from turtle import*
   clear()
   pensize(3)
   for i in range(6):
   right(60)
   color("black","blue")
   begin_fill()
   for j in range(4):
   forward(100)
   right(90)
   end_fill()

4. from turtle import*
   clear()
   pensize(3)
   clr=["blue","brown","red","green","orange","purple"]
   for i in clr:
   right(60)
   color("black",i)
   begin_fill()
   for j in range(4):
   forward(100)
   right(90)
   end_fill()

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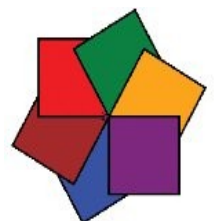
Unit 6.   MAP READING
(Practical worksheets)

Activity   : Setting time or date and showing sun or moon
Software : Sunclock
Time :   40 min.

a. Open the Sunclock [Applications – Education – Sunclock]
b. Maximise the window and click on the screen to appear the Menu bar
c. To display the world map with time zone, click on **!** (clock and Map tool)
d. To hide day or night, click on **N** (Toggle night tool)
e. To display longitudes, click on **M** (Toggle meridian tool)
   Click the zero degree meridian, then 30, 60, 90, 120 or 180 degree meridians and see the time change.
f. To display latitudes, click on **T** (toggle tropic tool)
g. To adjust the time to another time of a particular month, click on **G** (Adjust progress value tool).
   [**A** for forward value and **B** for backward value]

   If we select a place from the map (eg : Chennai) and activate the Animation tool [   ],
   and when we stop the animation where the <u>day starts</u> at the same place, we can note down the legal time
   at the bottom. [Click on **Y** (Sun/Moon toggle tool) to see the position of sun at that time].
   When we stop the animation where the <u>night starts</u> at the same place, we can note down the legal time at
   the bottom. [Click on **Y** (Sun/Moon toggle tool) to see the position of sun at that time].
        To see the solar time, we have to click on **S** (Solar time mode).
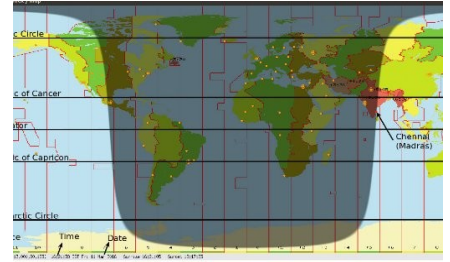
Worksheet 2

Activity   : Displaying data of layers of a panchayat map and adding new layer.
Software : Quantum GIS
Time :   40 min.

a. Open a panchayat map through Home – QGIS folder – Project – Open.
b. Select a layer and right click on it – Open Attribute Table.
   See the details. Repeat this by selecting each layer.
c. To add data by creating a new layer,
   • Layer – Create Layer – New Shapefile Layer
   • Select the Layer Type – Point – Add new attributes one by one in the place of New Attributes
     (define each as text, number etc.)
   • Save this layer with a name (eg; Well.shp)
   • To add details of each attribute, select the newly created layer – Press the Toggle Editing button –
     Press Add Feature button –Click a location to be marked – Save
   • Press the Toggle Editing button and disable the Editing tool.
   • To give colour, size or label the points, Select the layer – right click on it – Properties window.

Worksheet 3

Activity   : Buffering road (5 m)
Software : Quantum GIS
Time :   40 min.

a. Open the panchayat project file [Applications – Science -- QGIS -- Project – Open]
b. Select the Road layer, – Vector – Geoprocessing Tools – Buffer(s)
c. Select the layer to be buffered – Enter the length of buffering (ie, 5 m) – Ok – Close the window.
d. Drag the buffered layer under the Road layer – Zoom in .
   • Use the Measure tool and measure the road breadth using mouse.
   • Use the Identify Features tool to find out the buildings that may get affected.
e. To print the new map, Project – New Print Composer – press Add new map button and drag the mouse
   along the diagonal of the window – (Add required information, if any) – Composer – Export as svg or png.

Unit 8.   DATABASE – AN INTRODUCTION
(Practical worksheets)

Worksheet 1

Activity   : Creating a new database file
Software : LibreOffice Base
Time :   40 min.

a. Applications – Office – LibreOffice Base
b. 1.Select database – Create new database – Finish – Save with a name.
c. Open the saved file – Tables from Database panel – Create Table in Design View from the Task panel
- In the new window, define the Field Name and Field Type.
- To define one as the Primary Key, right click on the left cell of the same.
f. To add new data, select Forms from Database panel – Use Wizard to create Form from the Task panel
- From the Tables or queries, select the created table – Click on the arrow button [>>] to include all fields to the forms – Next
- Select a suitable style from 7.Apply styles – Give a name from 8.Set name
- Finish
g. Open the created form appeared in the Work area and enter data.
   (by either double-clicking or right clicking on the image field, we can add an image)
   Use Tab key for next entry.

Worksheet 2

Activity   : Making a table of students in a class using Query
Software : LibreOffice Base
Time :   40 min.

a. Open LibreOffice Base – Open the saved database file
b. Queries from Database panel – Use Wizard to Create Query from the Task panel
- Select the fields in 1. Field selection – Click on the arrow button [>>] to include fields   – Next
- Specify 3.Sorting order [Sort by – select the desired class]
- Specify 4. Search condition [Select the condition – Fields – Next – Details of summary – Next]
- Finish
c. Open the created query appeared in the Work area.

Worksheet 3

Activity   : Preparing reports from database file
Software : LibreOffice Base
Time :   40 min.

a. Applications – Office – LibreOffice Base – Open the created database file
b. Report from Database panel – Use Wizard to Create Report from the Task panel
- Select the table or query – Click on the arrow button [>>] to include fields   – Next
- Select suitable lay out, if any
- In the Title of Report, give a name.
- Finish
c. Open the created report appeared in the Work area.

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Unit 9. MOVING IMAGES
(Practical worksheets)

Worksheet 1

Activity   : Animation of moving stars on night sky
Software : Synfig Studio
Time :   40 min.

a. Open Synfig Studio
   [Applications – Graphics – Synfig Studio]
b. Using the Rectangle tool, draw a rectangle to fill the entire canvas – Using the Fill tool, give black to the sky.
c. After choosing white colour using the Swap Fill tool, draw a few stars on the canvas using the Star tool.
d. Using the Transform tool, change the size, shape and position of the big star.
   - Select the big star – select frame 60 and click on the Add button in the Dock Panel
   - **On** the animate Editing Mode button – Drag the big star towards right side of the canvas.
   - Remove the selection of big star and **Off** the animate Editing Mode button – Using the play ▶ button, move the big star towards right side.
   - Again **On** the animate Editing Mode button – set frame 120 --Drag the star towards left side -- Click on the Add button in the Dock Panel
   - Remove the selection of star and **Off** the animate Editing Mode button – Using the play▶ button, move the big star towards both sides.
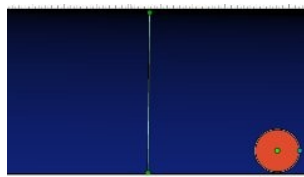e. Save video as .flv [File – Render – give a name with .flv – Render]

Worksheet 2

Activity   : Making animation of sunrise.
Software : Synfig Studio
Time :   40 min.

a. Open Synfig Studio [Applications – Graphics – SynfigStudio]
b. With the Gradient tool, (after selecting suitable Fill and Outline colours, eg: black and blue), drag from top to bottom of the canvas.
c. Using the Circle tool, draw the sun with orange fill colour
   - Using the Smooth Move tool, arrange the sun in appropriate place.
   - **On** the animate Editing Mode button – set frame 120 --Click on the Add button in the Dock Panel --Drag the sun towards left top corner
   - Using the Fill tool, change the colour of sun – Click on Gradient and change canvas colour
   - **Off** the animate Editing Mode button – Using the play button run the animation
d. Save video as .flv [File – Render – give a name with .flv – Render]

Worksheet 3

Activity   : Making animation of flying bird towards the branch of a tree
Software : Synfig Studio
Time :   40 min.

a. Open Synfig Studio
   [Applications – Graphics – Synfig Studio]
b. Import picture for the background [File Import – Home – School Resources – Resource 10- Animation]
   (to get the entire canvas, drag the handles of the red button seen on the top)
c. Import the image of the bird [File Import – Home folder – –]
d. Using the selection nodes, adjust the size and position of the bird.
e. **On** the animation button – Drag the bird towards the tree – Type 120f (frame) – **Off** the animation button.
f. Animation mode – Play.
g. Save video as .flv [File – Render – give a name with .flv – Render]

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