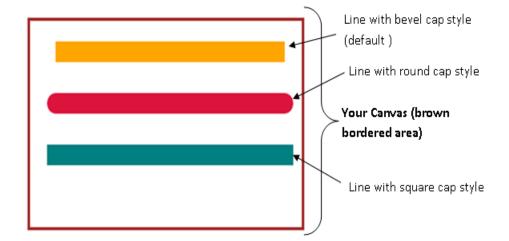
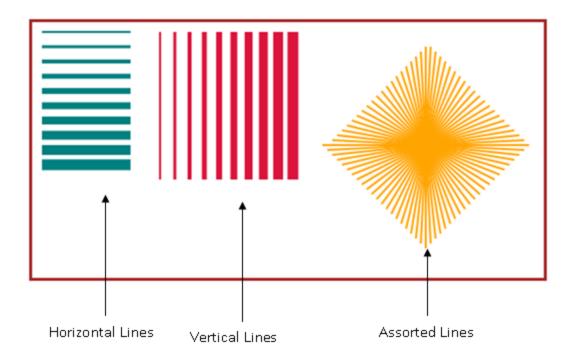
# 1

#### Paths and Text

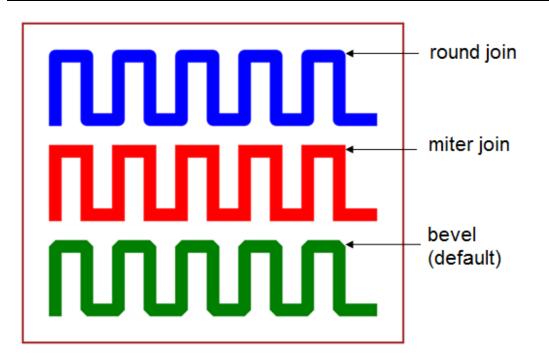
#### **Drawing lines**



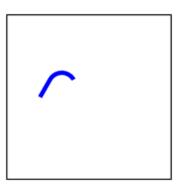
#### Drawing horizontal, vertical, and assorted lines

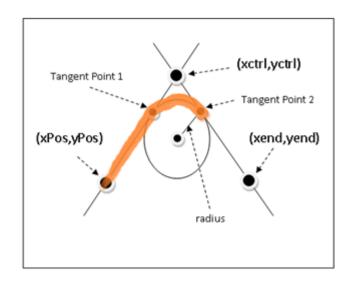


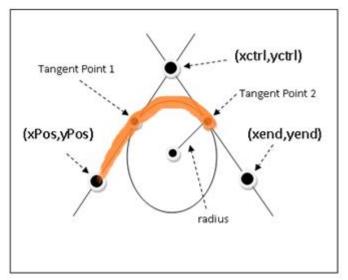
#### **Drawing joins**



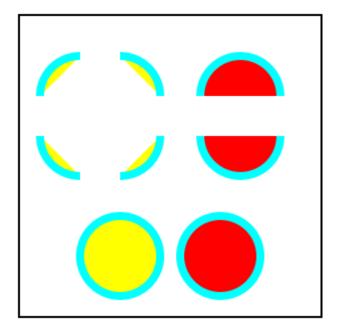
#### **Drawing arc1**

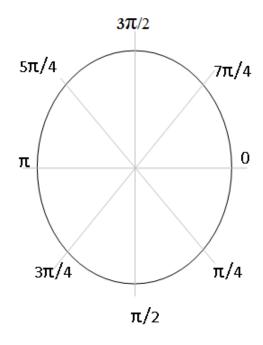


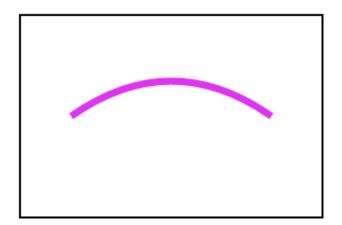




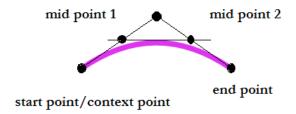
#### Drawing arc2



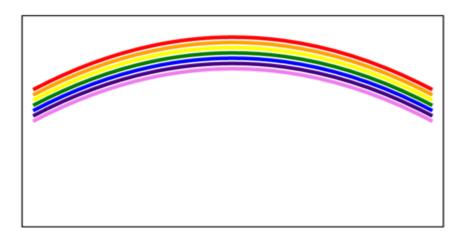




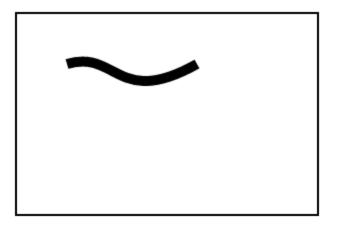
#### control point

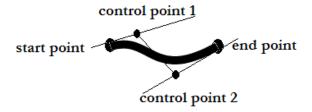


#### Drawing a rainbow

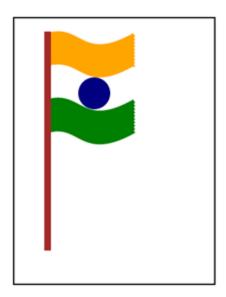


#### Drawing a Bezier curve





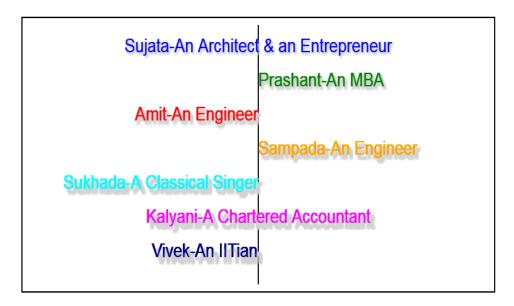
#### **Drawing a flag**



#### **Drawing text**

Sujata-An Architect & an Entrepreneur
Prashant-An MBA
Amit-An Engineer
Sampada-An Engineer
Sukhada-A Classical Singer
Kalyani-A Chartered Accountant
Vivek-An IITian

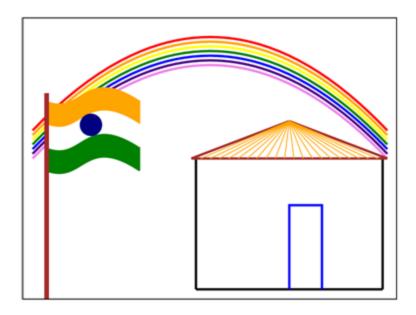
#### **Drawing 3D text with shadows**



#### Adding shadows to objects



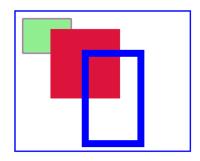
#### Drawing a house



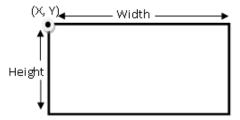
# 2

## **Shapes and Composites**

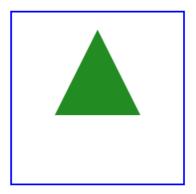
#### **Drawing rectangles**



#### Rectangles

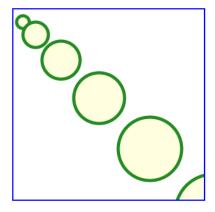


#### **Drawing triangles**



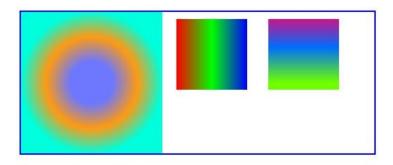
Triangles

#### **Drawing circles**



Circles

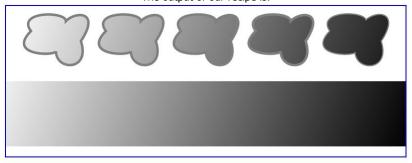
#### **Drawing gradients**



**Radial and Linear Gradient** 

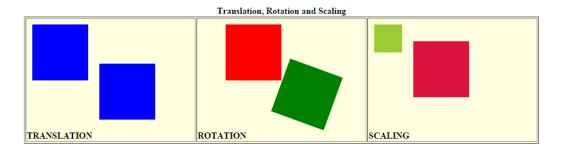
#### Working with custom shapes and styles

The output of our recipe is:

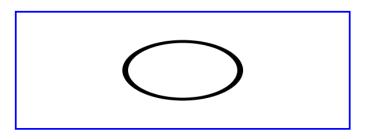


**Cloudy Sky** 

#### Demonstrating translation, rotation, and scaling



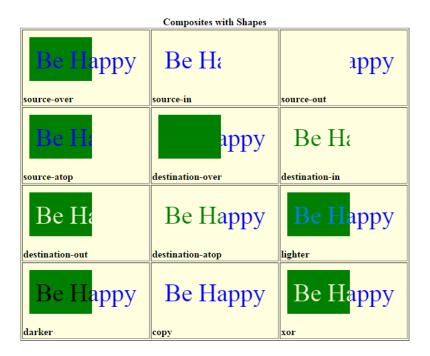
#### Drawing an ellipse



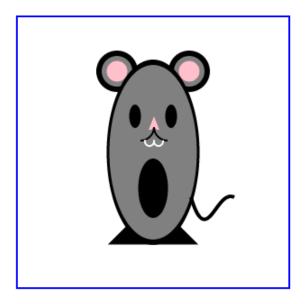
#### Saving and restoring canvas state



#### **Demonstrating composites**

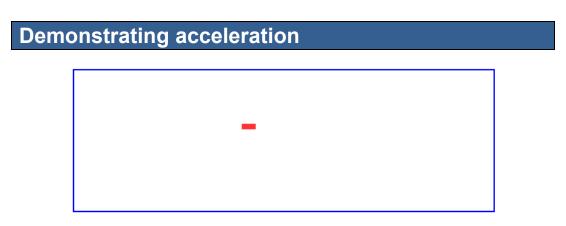


#### Drawing a mouse



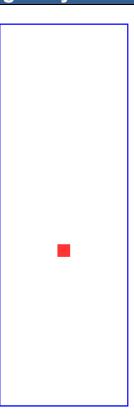
A Mouse

# 3 Animation



**Demonstration of Acceleration** 

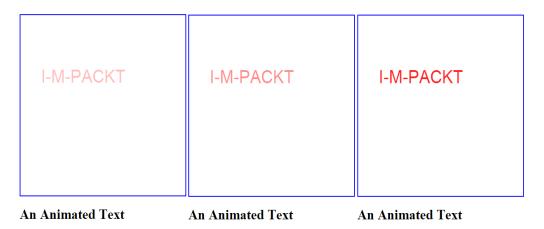
#### **Demonstrating gravity**



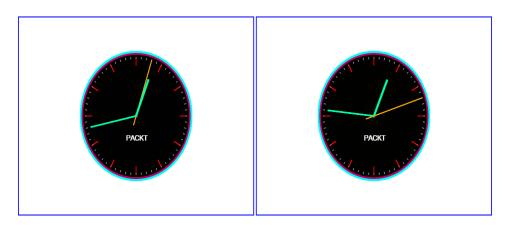
#### **Demonstration of Gravity**

# An animated line An animated line An animated line An animated line

#### **Animating text**



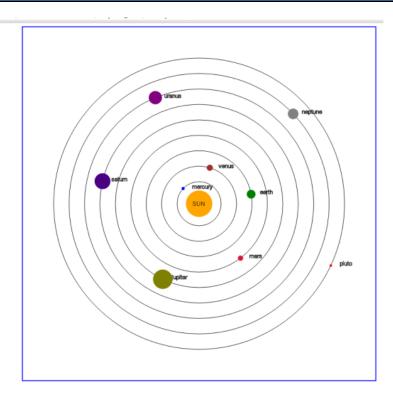
#### Animating a clock



**An Elegant Analog Clock** 

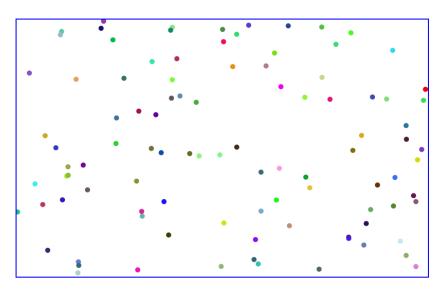
**An Elegant Analog Clock** 

#### Animating a solar system



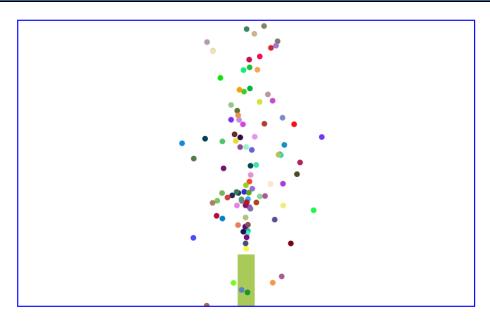
Solar system

#### Animating particles



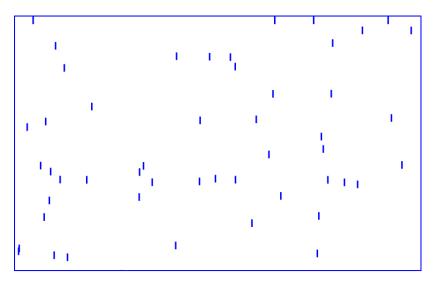
Particle Demo

#### Animating a particle fountain



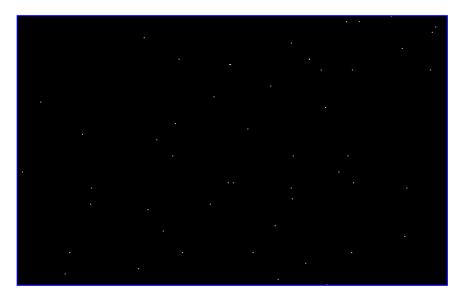
Particle Fountain

#### Animating the rain effect



Rain

#### Animating the snow effect



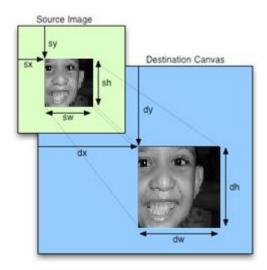
Snow

## Images and Videos

#### Drawing and cropping an image



An Image



#### Rendering effects to image



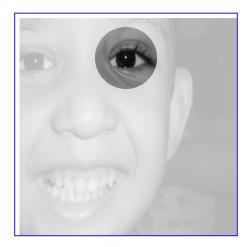
Image Effects-normal,negative,gryascale,red,sepia & noise

#### Drawing a mirror image



A mirror image

#### Clipping a path



Clipping

#### Animated clipping



Clipping

#### Converting canvas to image and back to canvas



Drawing in canvas 1.



Image saved from canvas 1 and assigned to image element



Image saved from canvas 1 and drawn in canvas 2

#### Working with videos



A Video

#### Rendering effects to videos



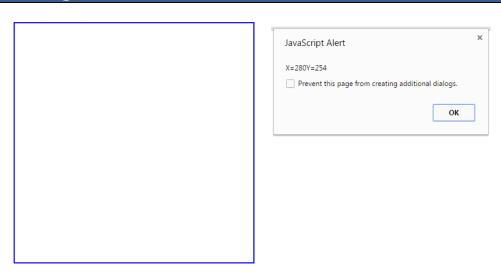
Video Effects (inverted, grayscale and embossed)

#### Creating a pixelated image focus



### Interactivity through Events

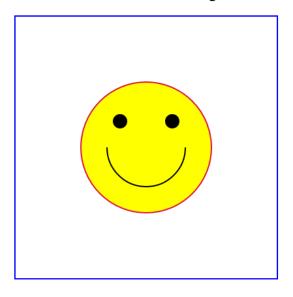
#### Working with mouse coordinates

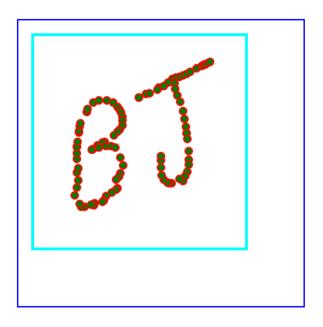


click on the canvas

#### Making a face smile

I love to smile. Please place the cursor on me





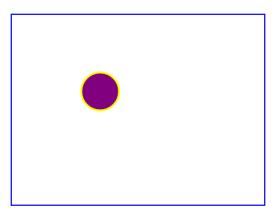
click inside the rectangle to spot

Reset

#### Simulating car movements



#### **Dragging and dropping**



drag and drop the circle

#### Combining events and animation

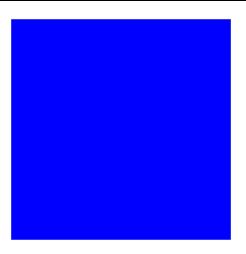
Score Area

Number of Hits=8

click the yellow circle to score

7:32:57

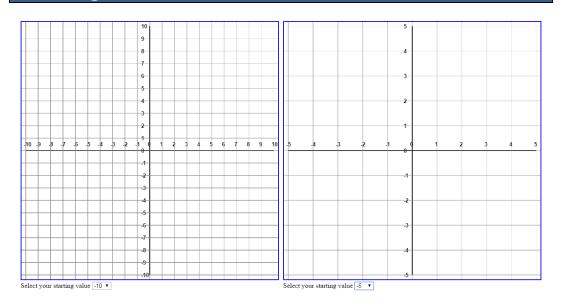
#### **Demonstration a touch event**



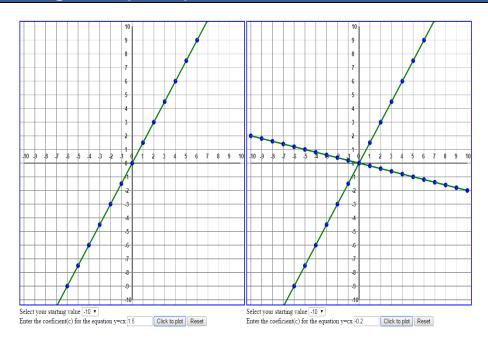
## 6

## **Creating Graphs and Charts**

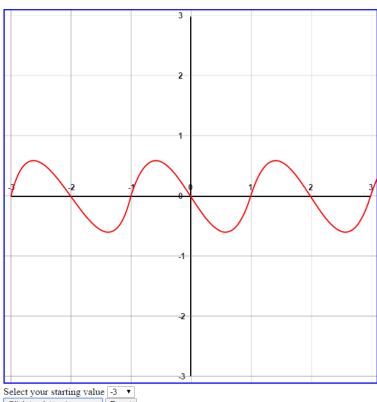
#### **Drawing the axes**



## Drawing a simple equation



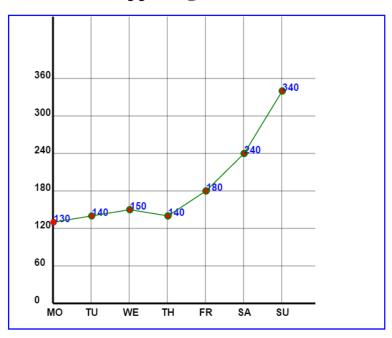
## Drawing a sinusoidal wave



Select your starting value -3 ▼
Click to plot a sine wave Reset

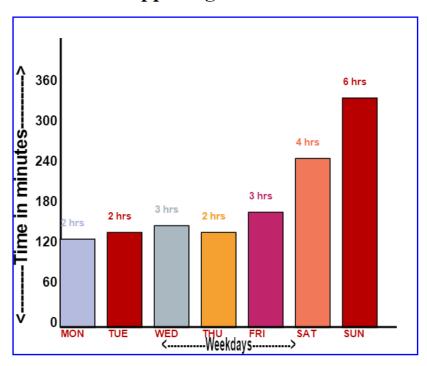
## Drawing a line graph

## Your WhatsApp Usage



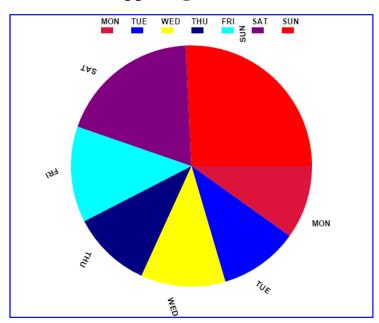
## Drawing a bar graph

## Your WhatsApp Usage



## Drawing a pie chart

## Your WhatsApp Usage



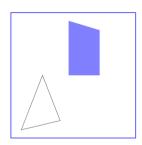
# 73D Modeling

## **Rendering 3D objects**



3D rotating objects using three.js

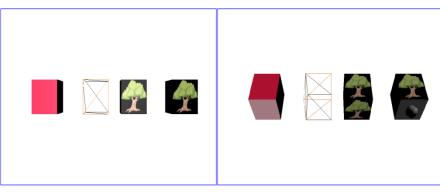
Use arrow keys to make the shapes rotate. Press Enter key or spacebar to reset



3D rotating objects using three.js

Use arrow keys to make the shapes rotate. Press Enter key or spacebar to reset

#### **Drawing 3D cubes**



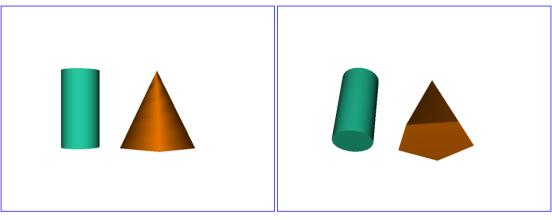
3D rotating cubes using three.js

Use arrow keys to make the shapes rotate. Press Enter key or spacebar to reset

3D rotating cubes using three.js

Use arrow keys to make the shapes rotate. Press Enter key or spacebar to reset

## Drawing a 3D cylinder and cone



3D rotating cylinder and cone using three.js

Use arrow keys to make the shapes rotate. Press Enter key or spacebar to reset

3D rotating cylinder and cone using three.js

Use arrow keys to make the shapes rotate. Press Enter key or spacebar to reset

## Drawing a 3D sphere and torus



3D rotating sphere and doughnut(torus) using three.js

Use arrow keys to make the shapes rotate.

Press Enter key or spacebar to reset

3D rotating sphere and doughnut(torus) using three.js

Use arrow keys to make the shapes rotate.

Press Enter key or spacebar to reset

## **Drawing 3D text decorated by particles**



3D rotating Text using three.js

3D rotating Text using three.js

Use arrow keys to make the text rotate and change the position of particlesUse arrow keys to make the text rotate and change the position of p Press Enter key or spacebar to reset Press Enter key or spacebar to reset

## Drawing a panorama



3D rotating sphere using three.js

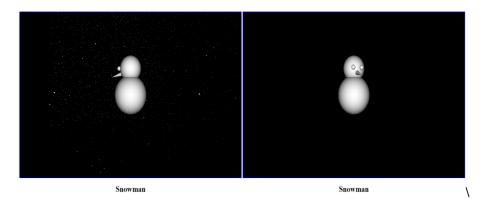
Press Enter key or spacebar to reset



3D rotating sphere using three.js

Use arrow keys to move through the picture. Use arrow keys to move through the picture. Press Enter key or spacebar to reset

## Drawing a snowman



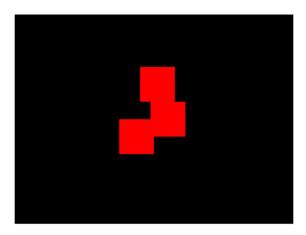
## 8

## Game Development

## **Understanding the gaming states**

Fri Jan 22 2016 05:27:13 GMT+0530 (India Standard Time)

## Drawing on canvas



## Playing some music

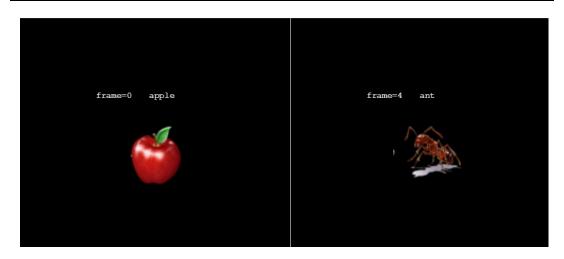


## **Using sprites from the sprite sheet**





## **Demonstrating animation**



## **Demonstrating collision**



## **Demonstrating physics**

```
Sprite: (128 x 128) anchor: 0 x 0
x: 300.0 y: 300.0
angle: 0.0 rotation: 0.0
visible: true in camera: true
bounds x: 300.0 y: 300.0 w: 128.0 h: 128.0

Sprite: (62 x 46) anchor: 0 x 0
x: 300.0 y: 300.0
angle: -128.5 rotation: -2.2
visible: true in camera: true
bounds x: 261.4 y: 222.8 w: 74.6 h: 77.2
```

## Game 1 – Fruit Basket

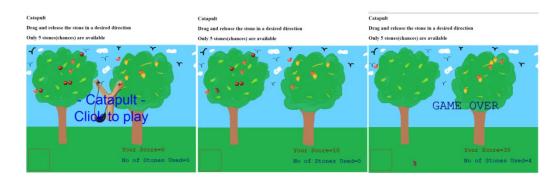
#### Fruit Basket

Use arrow keys to move left or right

Press ESC whenever you want to stop the game



## Game 2 – Catapult



# 9

## Interoperability and Deployment

## Styling text and background using CSS

