

Android Development Course

# DRAWING APP

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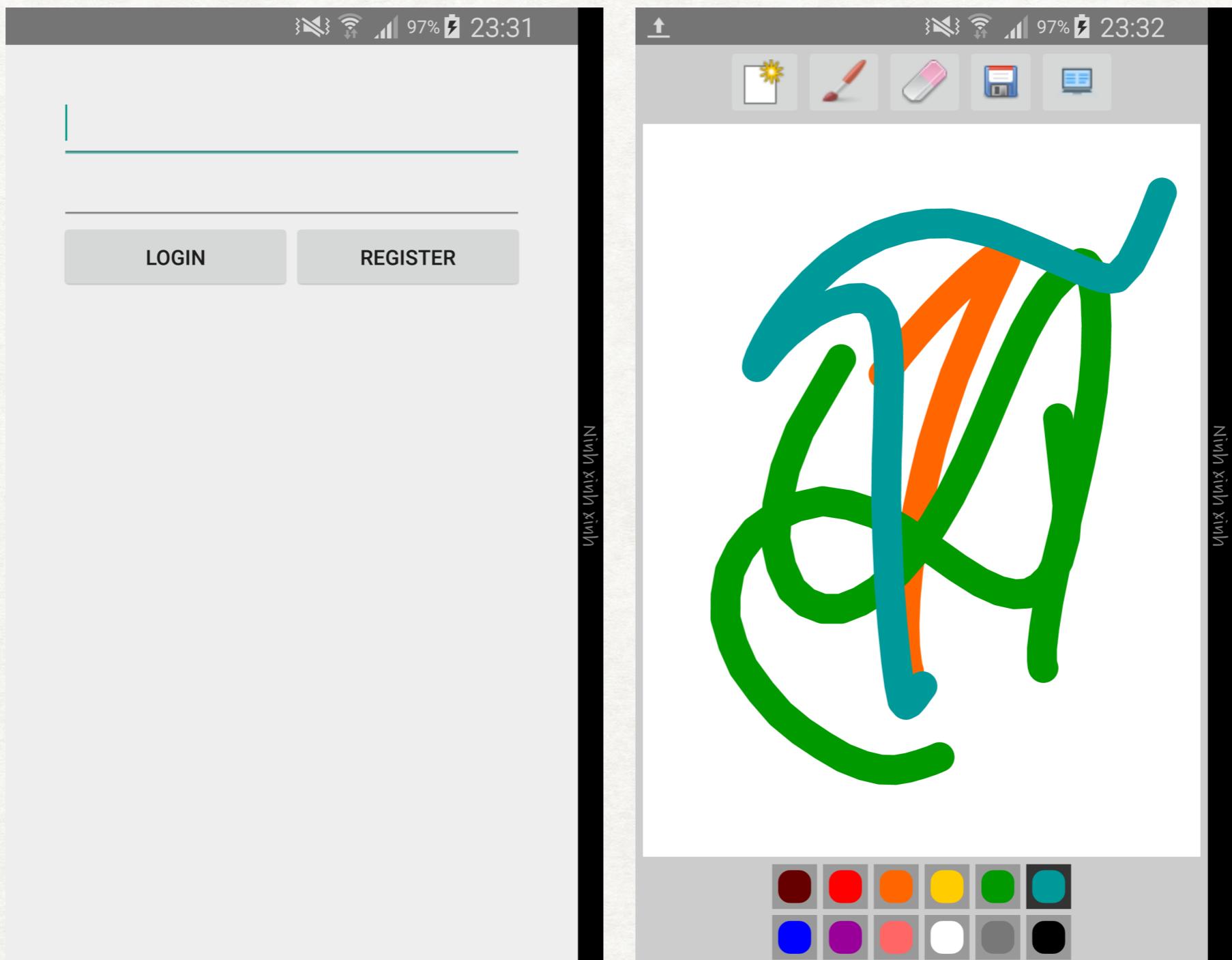
# Introduction

- This application is built for keeping your hand drawing and save it in time
- Each drawing can be stored locally on your devices or on a server
- You can share you drawing with your friend through facebook or our server

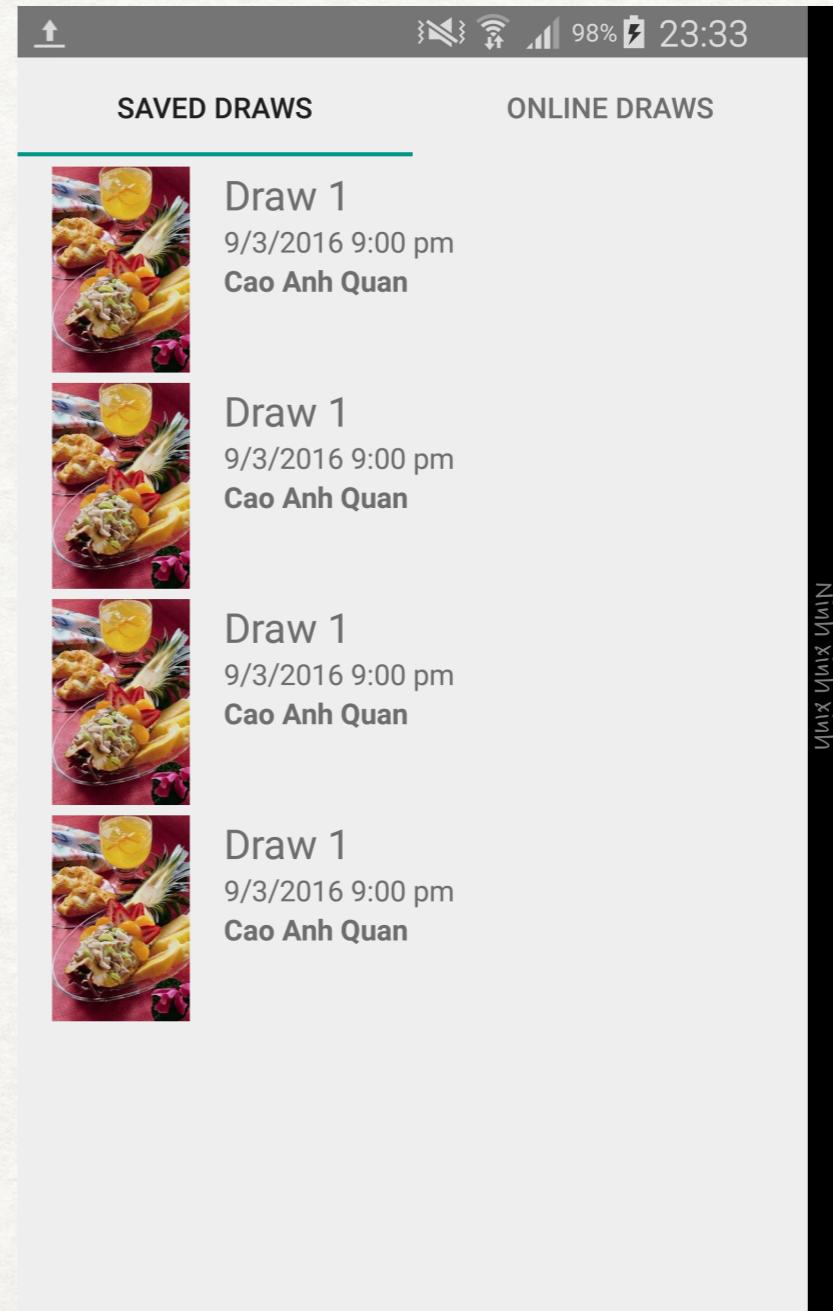
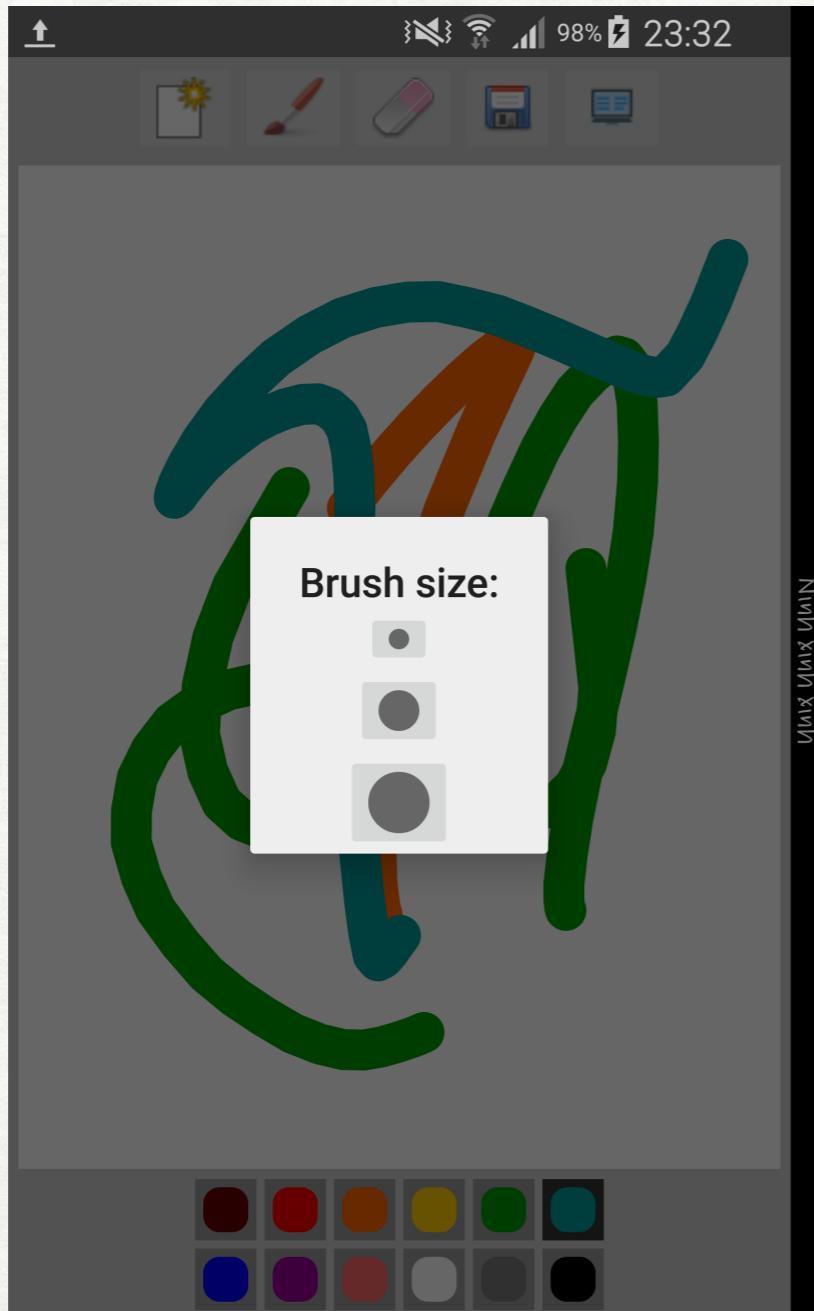
# Main Components

- Authentication Component: LoginActivity
- DrawingView – Where user will draw.
- Essential Buttons: Save, New, Erase, Brush
- Button for user to change color
- The list of Saved Draw and Online Draw

# Figures



# Figures

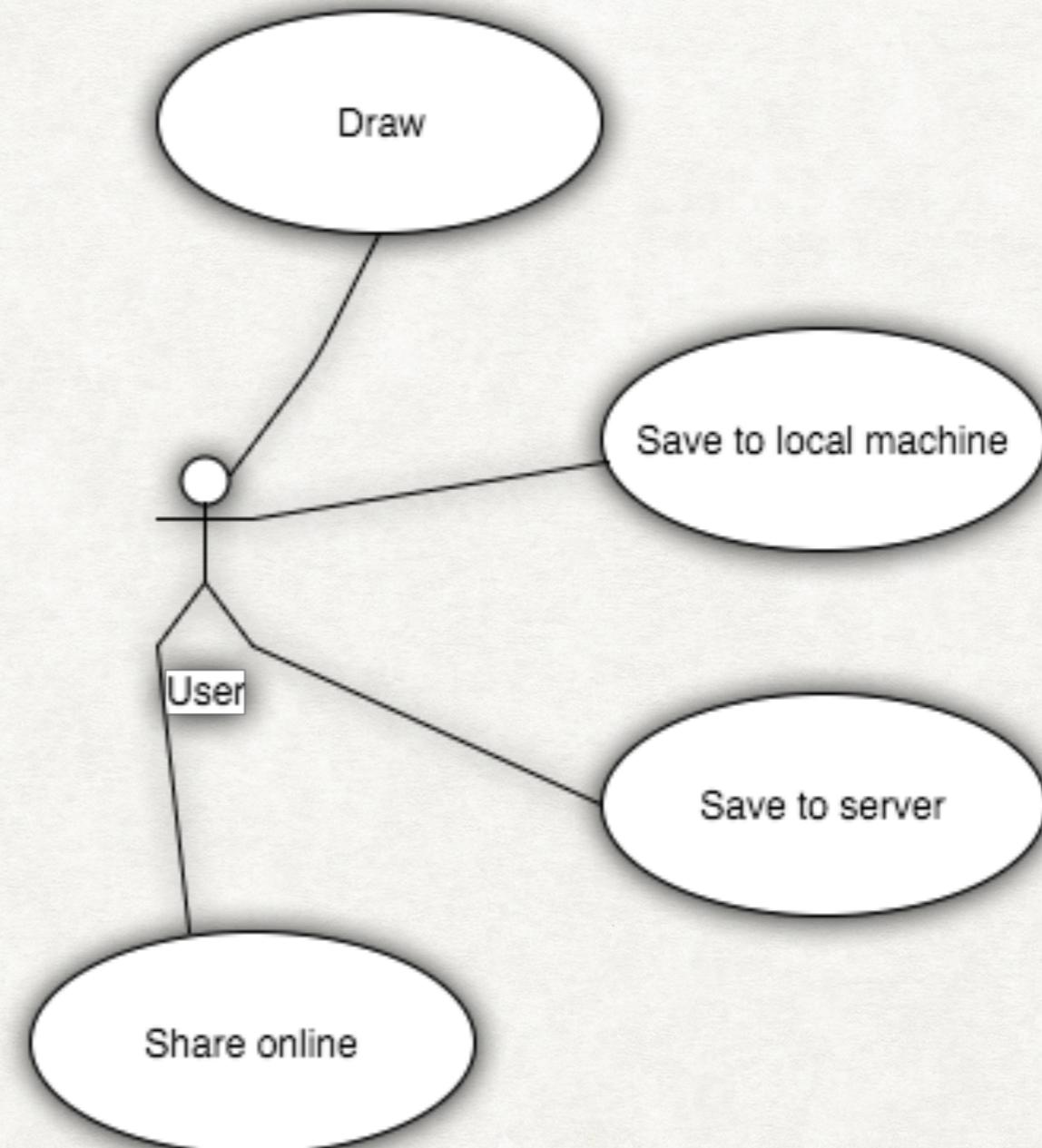


# Activities & Fragment

- 4 Fragments:
  - LoginFragment: handle the login function.
  - DrawFragment: Contain all the essential components for drawing like DrawingView, Save Button, New Button.
  - SavedDrawFragment: Show list of Saved Draws
  - OnlineDrawFragment: Show list of Online Draws
- 3 Activities:
  - LoginActivity: contain the Login Fragment
  - DrawActivity: Contain the DrawFragment
  - MainActivity: Container the ViewPager to switch between the SavedDrawFragment and OnlineDrawFragment

# Use Case

- Draw
- Upload to server
- Save on local machine
- Share with others



# Feature

- Draw
- Change brush color
- Change brush size
- Erase

# Networking

- Application will send request to Php Server to upload and retrieve JSON data Async for Authentication.
- We will host our server running PHP by using Amazon Web Service Elastic Computing (AWS EC2)
- In the future, Our application will store image on Simple Storage Service (S3) of AWS and also connect to server and put the data to Database on Server so we can get it later.
- We use Volley for Sending and Retrieving data.

# OPTIMIZATION

- Save the drawing in Vector format (SVG).
- When we upload the image, we will also create a thumbnail of it. Therefore, when we show the list of image to user, we can show the thumbnail instead of original image and we will load the origin online if user click on the list item to view the detail.
- We can add more drawing option and function. For example, user can use slider to change the brush size instead of 3 fixed size as we are using.
- We can also utilize the nodejs and socket.io to make the application real time.

# DEMO

# CONCLUSION

- We have successfully implemented all the basic functions of drawing application: Change brush size, color, create new empty draw and save to SD card and network function – Login.
- We do not have enough time to fully implement the network part of the application: Our application does not have the ability to upload the image to server, store the draws history and retrieve the drawings from server.
- Future work: We will implement the network part of the application so user can upload the drawing to server and get the online drawing. We also use sqlite to save the Draw history on the machine so user can edit and get the Saved Draw.