


A dark blue vertical bar on the left side of the slide. A blue arrow points to the right from the bar, containing the date.

3/11/2016

# PhotoBall

An Android App

Several thin, curved lines in dark blue and light grey originate from the bottom left and curve upwards and to the right.

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## I. Home Screen



When PhotoBall starts, the home screen is displayed to welcome the user. This page also serves as a demonstration platform for the app. The home page background will be used as a map with the ball bouncing around the screen. The play icon will be a pause icon when the ball simulation is running. The user can press the pause icon to stop the demo.

*Note: For every screen with the simulation, if the device is rotated, the picture map will not rotate.*

Slide the Menu Bar → Navigates to Menu

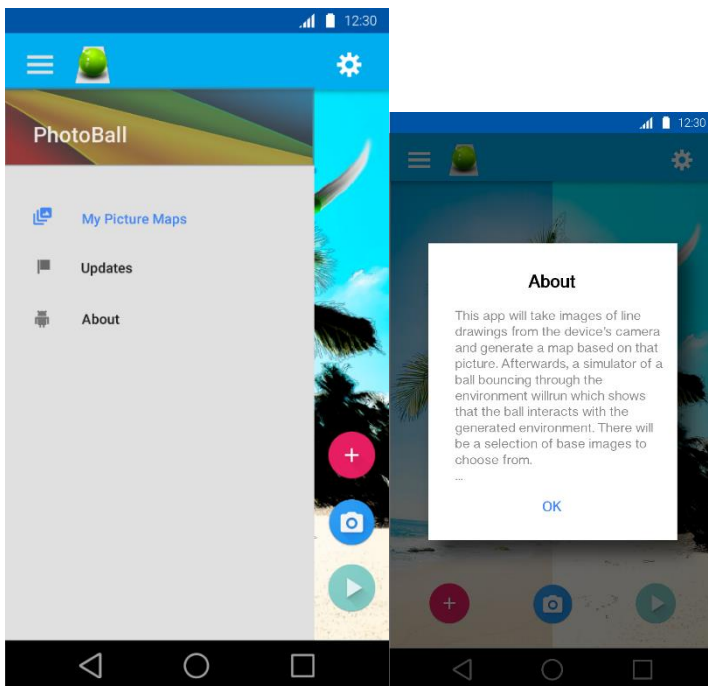
Tap the Gear → Navigates to Settings Screen

Tap Plus (+) Icon → Opens Camera Roll

Tap Camera Icon → Opens Camera

Tap Play/Pause Icon → Start/Stop Animation on Home Screen

## II. Menu



The Menu contains a list of clickable buttons: My Picture Maps, Updates, and About. The Updates button will show information regarding recent updates for the app. The About button will display information and instruction for the app.

Click My Picture Maps → Navigates to User's Stored Maps

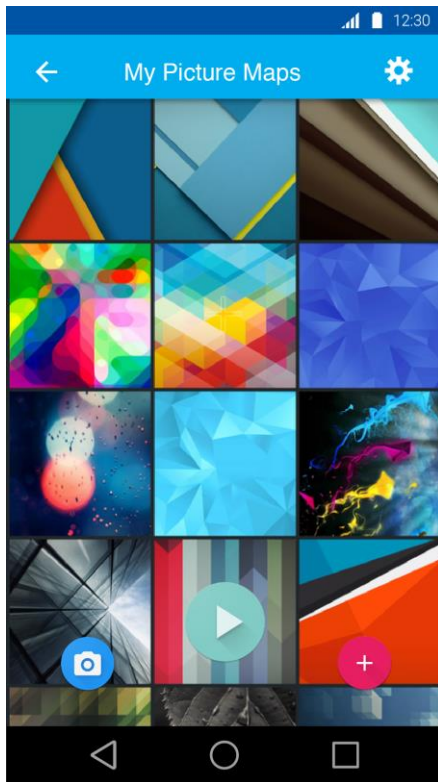
Click Update → Navigates to Update Screens

Click About → Navigates to About Screen

Tap Gear → Navigates to Settings Screen

Slide Menu Bar Left → Returns to Previous Screen

### III. My Picture Maps



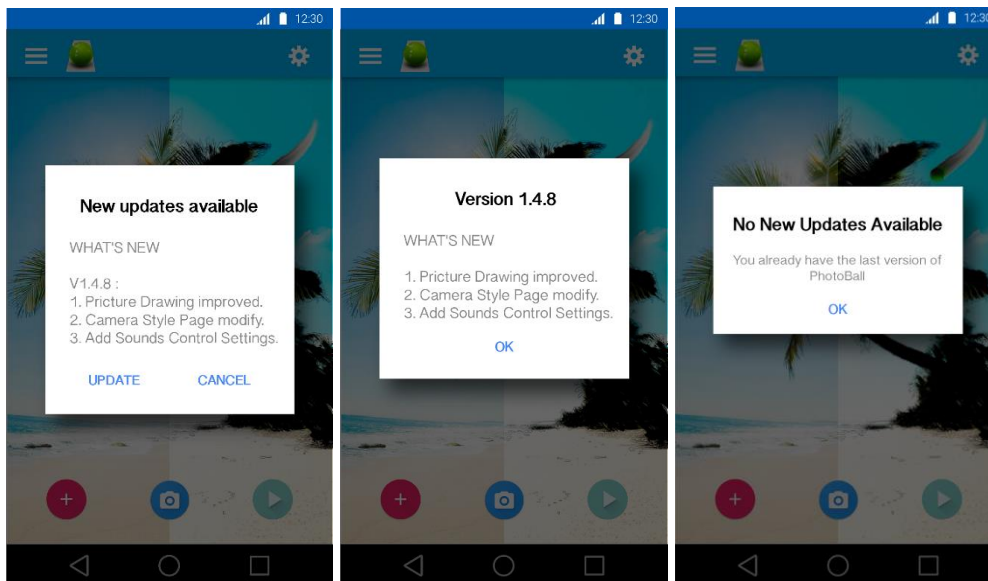
My Picture Maps is a storage place for the user to save personal picture maps that have been created by the app. The user can scroll through the screen to find an old picture and select it to play the map again.

Tap Gear → Navigates to Settings Screen

Tap Play Icon → Navigates to Loaded Picture Screen where user can start playing the simulation

Tap Back Icon → Returns to Home Screen

### IV. Updates

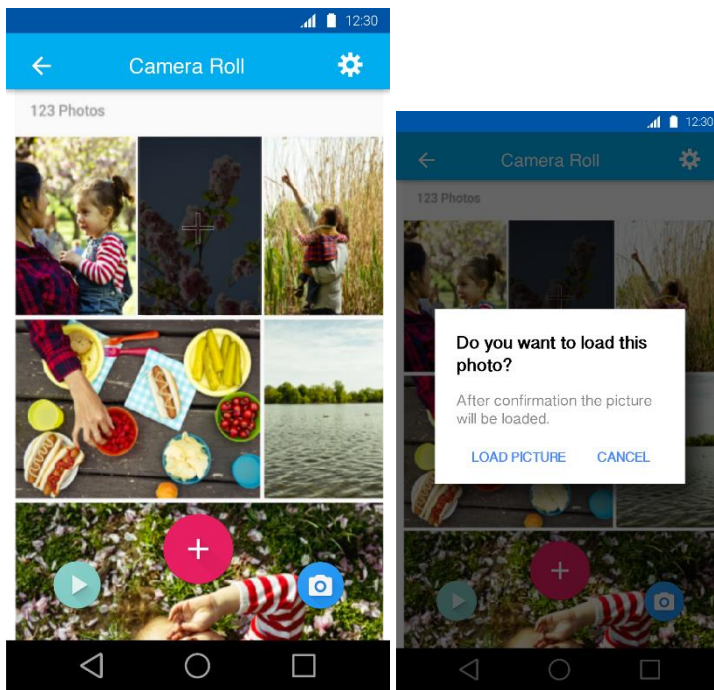


The Updates screen shows if there is an update for the app. If so, user can download it. After an update, information about the new version will be displayed

Tap Ok/Cancel → Navigates to Home Screen

Tap Update → Updates the app in Google Play Store

## V. Camera Roll Screen



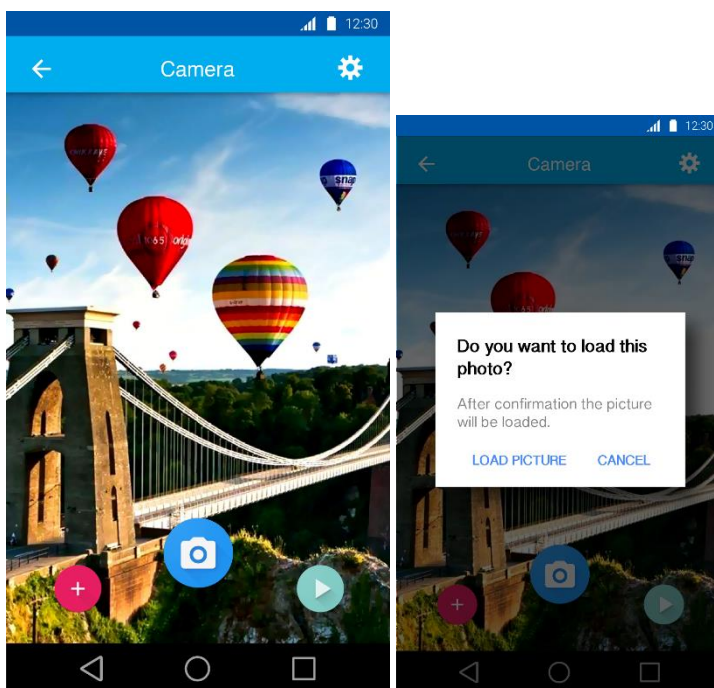
The Camera Roll screen will use the Android camera roll and allows the user to select a picture. After a picture is selected, a window will pop up to confirm the user's choice. Hitting Cancel will return the user to the Camera Roll. Hitting Load Picture will take the user to the Loaded Picture Screen, allowing the user to run the simulation.

*Note: We will use the device's camera roll to select the image.*

Tap Gear → Navigates to Settings Screen

Tap Back Icon → Returns to Home Screen

## VI. Camera Screen



The Camera screen will use the device's camera in order for the user to take a picture. After a picture is taken, a window will pop up to confirm the user's choice. Hitting Cancel will return the screen back to the camera. Hitting Load Picture will take the user to the Loaded Picture Screen.

Tap Gear → Navigates to Settings Screen

Tap Back Icon → Returns to Home Screen

## VII. Loaded Picture Screen



The Loaded Picture Screen will render a picture into a picture map. The user can then tap on the picture to place the ball on the map. After placing the ball and pressing play, the ball will start bouncing around the map. Objects with high contrast will be detected in the map as collision objects. The user can also press the pause button to stop the animation, and they can change the velocity of the ball by moving the slider positioned at the top of the three icons.

Slide the Menu Bar → Navigates to Menu

Tap Gear → Navigates to Settings Screen

Tap Play/Pause Icon → Starts Animation on Picture Map

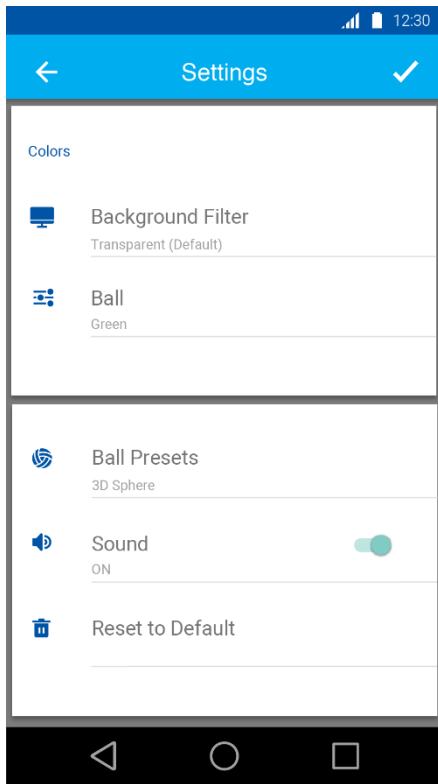
Tap Plus (+) Icon → Navigates to Camera Roll Screen

Tap Camera Icon → Navigates to Camera Screen

Slide Velocity Slider → Changes Velocity of the Ball



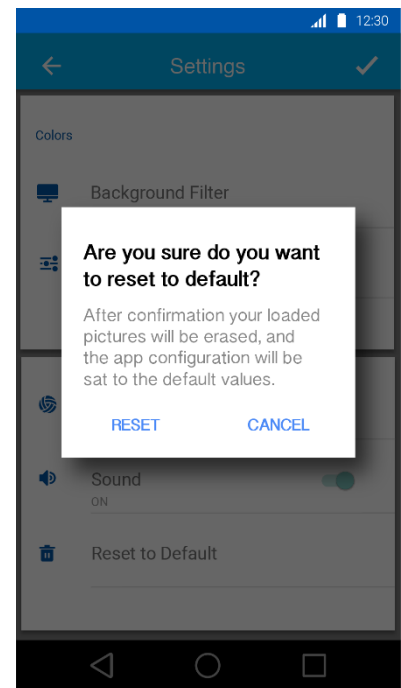
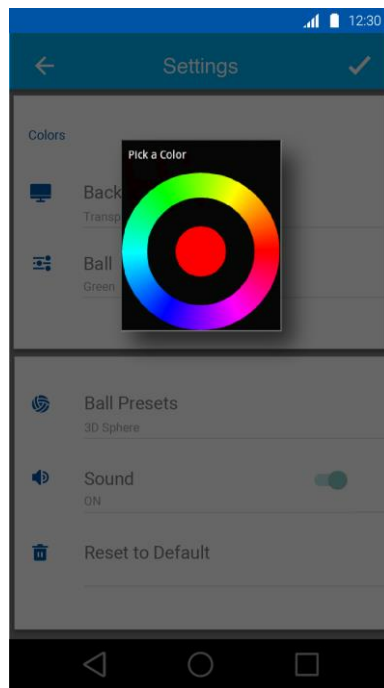
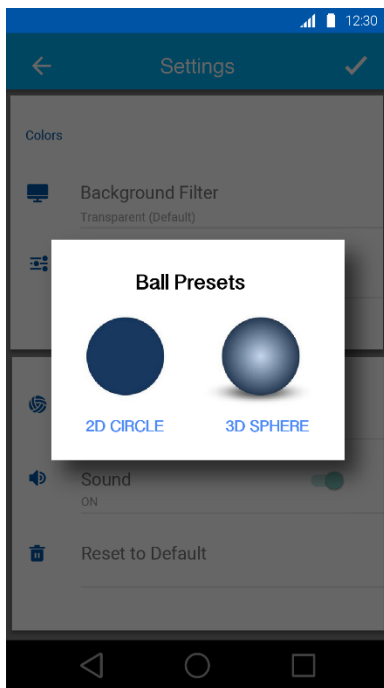
## VIII. Settings



The Settings Screen allows the user to change the settings for the app and simulation. The user can change the color and dimension of the ball, change the color of the background filter, turn on/off the sound, and reset to default settings.

Tap Checked Mark → Saves Settings and Navigates to Previous Screen

Tap Back Icon → Returns to Previous Screen Without Saving



## Alpha Features

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- Main “Play” screen button layout
  - The layout for the choose from camera roll, take a picture, and play buttons along with the title screen overlay will be done
- Camera support and confirmation window
  - App will contact camera and confirmation window will work.
- Select photos from camera roll
  - App will contact Android camera roll and confirmation window will work
- Generate map from a high contrast photo
  - Actual map photo will be generated and displayed in the Play Screen
- Setting Menu Items
  - Background Filter and Ball color picker will work. Background filter will work on loaded photo, but ball is not present until Beta.
  - Ball presets will not work until ball is completed
  - Sound can be turned on and off in settings
  - Reset to default button will clear preferences and will work in Alpha
- Burger Menu Items
  - Navigable burger menu items (My Picture Maps, Updates, About)
    - About will be complete. My Picture Maps and Updates will be fully completed in Beta Features
- Splash Screen with logo
  - Logo for the game will be chosen and the initial splash screen displayed

## Beta Features

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- Ball placer and simulator
  - Users can place the ball and actually bounce it around
- Velocity slider and Pause button functional
  - After playing, users can pause the simulator and change the speed of the bounce
- My Picture Maps and Updates burger buttons will be fully functional
  - My Picture Maps will have a list of maps that were made using photos
- Ball color customization
  - Customize the ball color
- Ball 2D/3D customization
  - Button in settings to choose from 2D and 3D ball will work

## Future Features

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- Better object and color detection in photos
  - Multiple distinct colors will be detected as boundaries
- Update info will be automatically pulled from a source, not manually added
  - Update information will be pulled from a website and be populated
- Share the photo with your friends for use with the app
  - Share button to allow friends to see the photos you have made maps out of
- Different shapes to choose from
  - Users can choose objects like triangles and squares instead of a ball
- Edit multiple photos together within the app
  - Choose multiple photos to put together into one map

## Use Cases

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- The user wants to create some cool artwork while using it within a game
- The user needs easy entertainment using their photos
- The user wants to test a complex design for a ball to go through
- The user needs an outlet for creativity that is engaging yet interesting to watch



# Screen Maps

