Button

```java
button1.setOnClickListener((View view)->{
    startActivity(new Intent(MainActivity.this,MainActivity2.class));
});
```

Spinner(Spinner Mode-Dialog(for Prompt),entries-Select the array)

```xml
<string-array name="concertType">
    <item>Rock Band</item>
    <item>Jazz Band</item>
    <item>Blues Band</item>
</string-array>
```

```java
spinnerConcertType.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener()
    @Override
    public void onItemSelected(AdapterView<?> adapterView, View view, int i, long l) {

int index = spinnerConcertType.getSelectedItemPosition();
```

Edit Text Empty? (Plain text-> hint)

```java
if(editTextNumTxt.getText().toString().isEmpty()){
```

Intent Sent & Receive

```java
//Send Results using Intent
Intent myResults = new Intent(this,ResultsActivity.class);

//Use a Bundle within Intent

Bundle bundle = new Bundle();
bundle.putInt("NUMTIX",numTix);
bundle.putString("TYPE",spinnerConcertType.getSelectedItem().toString());
bundle.putDouble("COST",cost);

//Adding Bundle to Intent
myResults.putExtras(bundle);

//Adding Bundle to StartActivity
startActivity(myResults);


Bundle bundle = getIntent().getExtras(); //GEtting the Extras
double cost = bundle.getDouble("COST",0);
String type = getIntent().getExtras().getString("TYPE","empty");
```

Add Image Asset

mipmap->Right click+new+image asset.

Change asset name in config asset.

then, change appropriate names in manifest

```xml
android:allowBackup="true"
android:icon="@mipmap/ic_launcher_wt"
android:label="@string/app_name"
android:roundIcon="@mipmap/ic_launcher_wt_round"
```

Add Logo to Action Bar

```java
ActionBar actionBar = getSupportActionBar();
actionBar.setDisplayShowHomeEnabled(true);
actionBar.setDisplayUseLogoEnabled(true);
actionBar.setLogo(R.mipmap.ic_launcher_wt_round);

actionBar.setTitle(R.string.txtTitle);
```

Radio Grp Button Selection

```java
if(radioGroup.getCheckedRadioButtonId() == -1)


else if(radioGroup.getCheckedRadioButtonId() == R.id.radBtnKgsToLbs)
```

Array Adapter Basic

```java
listViewSites = findViewById(R.id.listViewSites);
ArrayAdapter<String> sitesArrAdapter = new ArrayAdapter<>
        (MainActivity.this, android.R.layout.simple_list_item_1,ChicagoSiteNames);
listViewSites.setAdapter(sitesArrAdapter);
```

Custom Adapter (Display image in left of txtvw side) .. Don't forget to retrn view

Layout > New Xml > Layout Xml

Then create a Class that extends BaseAdapter

```java
public View getView(int i, View view, ViewGroup viewGroup) {

    if(view == null){
        LayoutInflater layoutInflater = LayoutInflater.from
            (viewGroup.getContext());

        view = layoutInflater.inflate(R.layout.layout_siteitem,viewGroup,false);

    }

TextView textViewSiteItem = view.findViewById(R.id.textViewSiteItem);
textViewSiteItem.setText(SitesNamesList.get(i));

Drawable img = ResourcesCompat.getDrawable(
        viewGroup.getResources(),SitesPicsList.get(i),viewGroup.getContext().getTheme());
img.setBounds(0,0,150,150);
textViewSiteItem.setCompoundDrawables(img,null,null,null);
textViewSiteItem.setCompoundDrawablePadding(8);
```

Then in Main Class

```java
//custom adaptor
SitesAdapter sitesAdapter2 = new SitesAdapter(ChicagoSiteNames,ChicagoSitePics);
listViewSites.setAdapter(sitesAdapter2);
```

Clickable custom list

```java
listViewSites.setOnItemClickListener((AdapterView<?> adapterView, View view, int i, long l) ->{
```

Opening in Websites

1.Open Directly

```java
switch (i){
    case 0:
        //Open browser
        startActivity(new Intent(Intent.ACTION_VIEW, Uri.parse("https://www.themagnificentmile.com/")));
        break;
    case 1:
        //Start Art Institute Activity
        startActivity(new Intent(this,NavyPierActivity.class));
        break;
```

2.Open Using Link in the new Activity

```java
TextView textViewNavyPier = findViewById(R.id.textNavyPierHours);
textViewNavyPier.setText("Click for Info "+
        "\nhttps://navypier.org/plan-your-visit/hours-and-admission/");

Linkify.addLinks(textViewNavyPier,Linkify.WEB_URLS);
```

Splash Activity

Move <intent filter> from main to new activity

Change `android:exported` to `true`

```java
TimerTask timerTask = new TimerTask() {
    @Override
    public void run() {
        startActivity(new Intent(SplashActivity.this,MainActivity.class));
    }
};

Timer timer = new Timer();
timer.schedule(timerTask,3000);
```

Remember set LinearLayout H/W to (100 Eg) and Internal Items to match Parent

For weight to work, set W to 0dp

Music Player Custom Adapter Code

```java
TextView textViewSong = view.findViewById(R.id.textViewSongItem);
ImageView imageViewSong = view.findViewById(R.id.imageViewSongItem);
ImageView imageViewPlayStop = view.findViewById(R.id.imageViewPl

textViewSong.setText(songNames.get(i));
imageViewSong.setImageResource(songPics.get(i));
if(i==currentPlayIndex){
    imageViewPlayStop.setImageResource(R.drawable.stop);
}
else{
    imageViewPlayStop.setImageResource(R.drawable.play);
}

return view;
```

When setcurrntIndex calls, data repopulates

```java
public void setCurrentPlayIndex(int currentPlayIndex) {
    this.currentPlayIndex = currentPlayIndex;
    notifyDataSetChanged(); //adapter repopulates data with getView
}
```

Put songs in res>new> Resource Directory

Media Player Obj

```java
MediaPlayer mPlayer=null;
```

```java
listViewSongs.setOnItemClickListener(
    (AdapterView<?> adapterView, View view, int i, long l) ->
        if(mPlayer!=null && mPlayer.isPlaying())
            mPlayer.stop();

        if(myAudioAdapter.getCurrentPlayIndex() == i){
            myAudioAdapter.setCurrentPlayIndex(-1);
        }
        else{
            myAudioAdapter.setCurrentPlayIndex(i);
            playMusic(myAudioAdapter,myAudioAdapter.getCurren
            Log.d("inPlay","Song Play");
        }
    });
```

```java
public void playMusic(AudioAdapter myAudioAdapter,int i){
    mPlayer = MediaPlayer.create(MainActivity.this,songRaw.get(i));
    mPlayer.start();
    mPlayer.setOnCompletionListener((MediaPlayer mediaPlayer)-> {
        Log.d("inPlay","inside looping");
        try{
            //mPlayer.prepare();
            myAudioAdapter.setCurrentPlayIndex((myAudioAdapter.getCurrentPlayIndex()+1)%songRaw.size());
            Log.d("inPlay",""+myAudioAdapter.getCurrentPlayIndex());
            playMusic(myAudioAdapter,myAudioAdapter.getCurrentPlayIndex());
        }catch(Exception e){
            e.printStackTrace();
        }
    });
```

Grid View

ImageAdapter-Custom Adapter

```java
@Override
public View getView(int i, View view, ViewGroup viewGroup) {
    if(view == null){
        ImageView imageViewItem = new ImageView(viewGroup.getContext());
        // imageViewItem.setLayoutParams(new ViewGroup.LayoutParams(120,120));
        imageViewItem.setLayoutParams(new ViewGroup.LayoutParams(GridView.AUTO_FIT,150));
        imageViewItem.setImageResource(imageList.get(i).getImgPic());
        imageViewItem.setBackgroundColor(Color.LTGRAY);
        view = imageViewItem;
    }
    return view;
}
```

Then in Main Class

```java
gridViewImages.setAdapter(myImageAdapter);
gridViewImages.setNumColumns(3);
gridViewImages.setHorizontalSpacing(8);
gridViewImages.setVerticalSpacing(8);
```

Shared Pref .. Gen OverrideMeth ->onPause

```java
@Override
protected void onPause() {
    super.onPause();
    SharedPreferences sharedPreferences = PreferenceManager.getDefaultSharedPreferences(this);
    SharedPreferences.Editor editor = sharedPreferences.edit();
    editor.putInt("IMGIND",clickedItem);
    editor.commit();//imp
}
```

Getting Item from sharedPref.. after the setOnItemClickListener

```java
SharedPreferences sharedPreferences = PreferenceManager.getDefaultSharedPreferences(this);
clickedItem = sharedPreferences.getInt("IMGIND",-1);
if(clickedItem != -1){
    imageViewLarge.setImageResource(animalPicGallery.get(clickedItem).imgPic);
}
else
{
    imageViewLarge.setImageResource(0);
}
```

Cancel Toast and make new Toast

```java
if(currentToast !=null){
    currentToast.cancel();
}
currentToast = Toast.makeText(MainActivity.this,
    "Sprcies : "+animalPicGallery.get(i).getImgName(),
    Toast.LENGTH_SHORT);
currentToast.show();
```