

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

اللَّهُمَّ إِنِّي
أَسْأَلُكَ عِلْمًا نَافِعًا
وَرِزْقًا طَيِّبًا وَعَمَلًا
مُتَقَبَّلًا

قَالُوا سُبْحَانَكَ
لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا
إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

قَالَ رَبِّ اجْعَلْ لِي
إِلَى كُلِّ شَيْءٍ عِلْمًا

قَالَ رَبِّ اجْعَلْ لِي
إِلَى كُلِّ شَيْءٍ عِلْمًا



ListViews

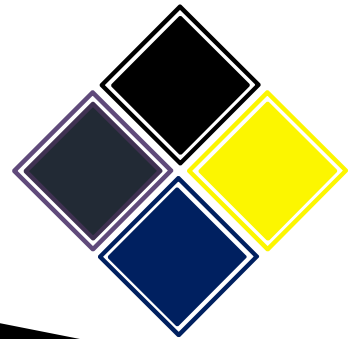
Mobile Computing

LECTURE 11_12

ListViews

Instructor:

Maulana Haq Nawaz



تصحیح نیت

حضرت محمد صلی اللہ علیہ وسلم

نے فرمایا

إِنَّمَا الْأَعْمَالُ بِالنِّيَّاتِ

ترج

اعمال کا دار و مدار نیتوں پر

اللَّهُمَّ إِنَّكَ عَفُوٌّ

تُحِبُّ الْعَفْوَ

فَاعْفُ عَنِّي

عن عائشة رضي الله عنها قالت : قلت يا رسول الله ﷺ
أرأيت إن وافقت ليلة القدر ما أدعو قال تقولين :

((اللَّهُمَّ إِنَّكَ عَفُوٌّ ...)) . صحيح ابن ماجه (3119)

Little Efforts Daily Will Make You the Greatest

To **systematically learn** and get **excellence** in any **concept / subject**

● روز کا کام روز کریں

● اک مہینے کا کھانا ایک دن میں نہیں کھایا جا سکتا،
ایسے ہی ایک مہینے کا کام ایک دن میں نہیں ہو سکتا

Little Efforts Daily Will Make You the Greatest

Importance of completing tasks on daily basis

» Main Reason of Failure in Life

- یہ کام کل کریں گے
- جو کام کبھی بھی ہو سکتا ہے وہ کبھی نہیں ہوتا
- زندگی ایک دن ہے اور وہ ہے آج۔ زندگی میں کل نام کی کوئی چیز نہیں ہے
- جو دن آپ کی زندگی سے چلا گیا اب واپس نہیں آئے گا
- آج کا کام آج ہی ہو سکتا ہے
- جو گز گیا وہ آنا نہیں ، آنے والے دن کا پتہ نہیں ، آج میدان جما ہے تو اپنے جوہر دکھاؤ

How to Achieve BIG Goals in Life

 **Balanced Life is Ideal Life** 😊

 **To achieve BIG Goals in Life**

❑ Make a **Schedule of 24 Hours** with a **focus** on **Five** main **components of Human Life**

- **Health**
 - Physical Health
 - Mental Health
 - Social Health
- **Spirituality**
- **Work**
- **Family**
- **Friends**

جو کام کریں دل سے کریں

کام کرنا۔



خوشی خوشی کام کرنا۔



اللہ کو ساتھ لے کر خوشی خوشی کام



آیت: **يَا أَيُّهَا النَّاسُ اعْبُدُوا اللَّهَ مَا لَكُم مِّنْ إِلَٰهٍ غَيْرُهُ ۚ فَرِحْتُمْ بِهٖ عِبَادَتِهِ ۖ فَمِنْ بَعْدِ ذَٰلِكَ تُكْفَرُونَ**

ترجمہ: یا اللہ ہم تیری ہی عبادت کرتے ہیں۔

اور تجھ ہی سے مدد مانگتے ہیں

Lecture Outline

- ① Revision**
- ② Adapters**
- ③ Android Adapters**
- ④ ArrayList**
- ⑤ ArrayAdapter**
- ⑥ ListView binding and onItemClick**
- ⑦ Passing data between activities**
- ⑧ Resources**
- ⑨ Stop Complaining! Stop Criticizing! Let's Start Contributing**
- ⑩ Lecture Summary**



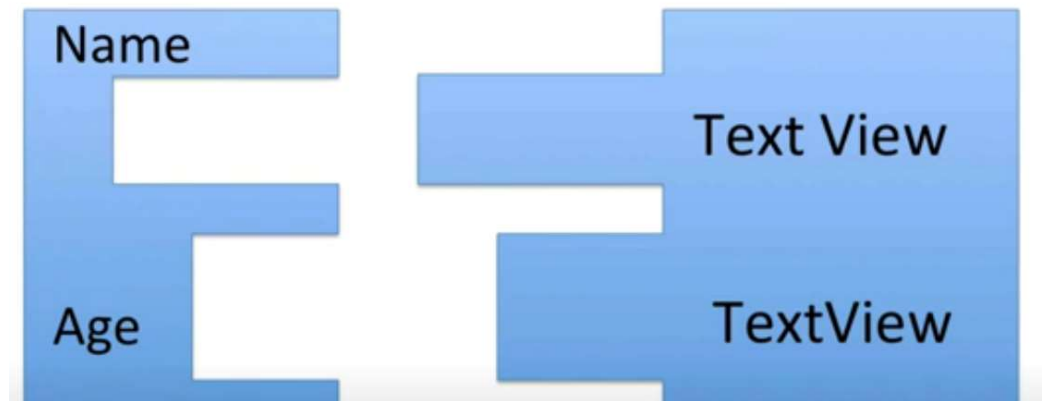
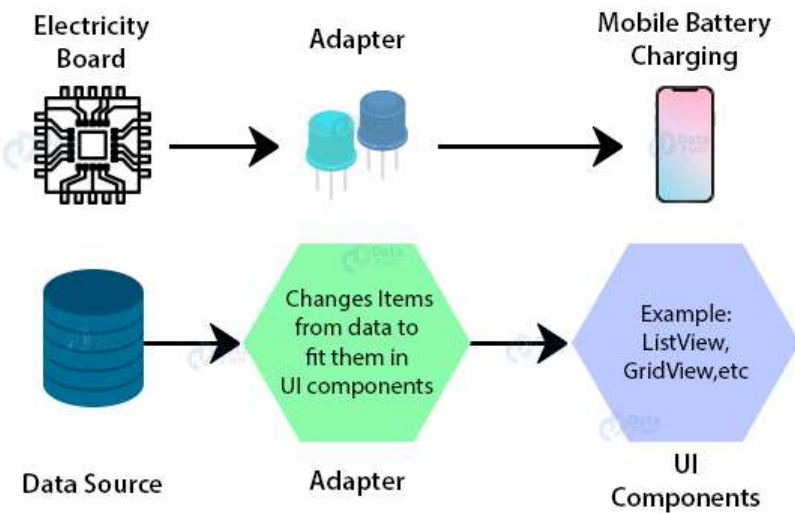
Adapters





Android Adapters

Adapters in Android





ArrayList

@Override

```
protected void onCreate(Bundle savedInstanceState) {
```

```
    super.onCreate(savedInstanceState);
```

```
    setContentView(R.layout.activity_main);
```

```
    ArrayList<String> friendList = new ArrayList<String>();
```

```
    friendList.add("Musa");
```

```
    friendList.add("Saad");
```

```
    friendList.add("Shahid");
```

```
    friendList.add("Ibraheem");
```

```
    friendList.add("Mahad");
```

```
}
```

```
}
```



ArrayAdapter

```
ArrayList<String> friendList = new ArrayList<String>();  
friendList.add("Musa");  
friendList.add("Saad");  
friendList.add("Shahid");  
friendList.add("Ibraheem");  
friendList.add("Mahad");
```

```
ArrayAdapter<String> arrayAdapter = new ArrayAdapter<String>  
    (context: this, android.R.layout.simple_list_item_1, friendList);
```



listView binding

```
ListView listView = findViewById(R.id.myListView);
```

```
ArrayList<String> friendList = new ArrayList<String>();  
friendList.add("Musa");  
friendList.add("Saad");  
friendList.add("Shahid");  
friendList.add("Ibraheem");  
friendList.add("Mahad");
```

```
ArrayAdapter<String> arrayAdapter = new ArrayAdapter<String>  
    (context: this, android.R.layout.simple_list_item_1, friendList);
```

```
listView.setAdapter(arrayAdapter);
```

```
ArrayList<String> studentList = new ArrayList<String> ();  
ListView listView;  
  
@Override  
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
  
    studentList.add("Saad");  
    studentList.add("Zahid");  
    studentList.add("Saeed");  
    studentList.add("Zainab");  
  
    ArrayAdapter<String> arrayAdapter = new ArrayAdapter<String>  
        (this, android.R.layout.simple_list_item_1, studentList);  
  
    listView = findViewById(R.id.listView);  
  
    listView.setAdapter(arrayAdapter);
```




listView binding

Recite

Write Code



listView add Record

Task Todo

ADD TASK



listView add Record

Task Todo

ADD TASK

Recite

Write Code



Add Record

```
buttonTaskAdd.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        myTodoTasks.add(editTextTask.getText().toString());  
    }  
});
```



Update View

```
buttonTaskAdd.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        studentList.add(editTextTask.getText().toString());  
        arrayAdapter.notifyDataSetChanged();  
    }  
});
```



Sorting of Records

```
Collections.sort(friendArraylist);
```



ListView Item Click Listener

```
listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
    @Override  
    public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {  
    }  
});
```

ListViews
Musa
Saad
Shahid
Ibraheem
Mahad

Complete list view

Item

The position of the view in the adapter.

Row ID of Item



listView Item Click Listner

```
listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
    @Override  
    public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {  
        Log.i( tag: "You selected ", friendList.get(i));  
    }  
});
```

```
listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
    @Override  
    public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {  
        editText.setText("You selected " + studentList.get(i));  
    }  
});
```




Delete Record

```
listviewTaskAdd.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
    @Override  
    public void onItemClick(AdapterView<?> parent, View view, int position, long id) {  
        new AlertDialog.Builder(Listview.this)  
            .setTitle("Delete Recod")  
            .setMessage("Do you really want to deete this task!")  
            .setIcon(R.drawable.ic_baseline_delete_forever_24)  
            .setCancelable(false)  
            .setPositiveButton("Delete", new DialogInterface.OnClickListener() {  
                @Override  
                public void onClick(DialogInterface dialog, int which) {  
                    myToDoTasks.remove(position);  
                    arrayAdapter.notifyDataSetChanged();  
                }  
            })  
            .setNegativeButton("No", new DialogInterface.OnClickListener() {  
                @Override  
                public void onClick(DialogInterface dialog, int which) {  
                    dialog.dismiss();  
                }  
            })  
            .show();  
    }  
});
```



ListView Item Click Listener

```
Log.i( tag: "You selected ", friendList.get(i));
```

The screenshot shows an Android emulator with a Nexus 5 API 24. The app is titled 'ListView' and features a button labeled 'BUTTON'. Below the button is a list of names: Ali, Babar, Shahid, Yasir, and Zain. The code on the right shows the implementation of the ListView item click listener.

```
String [] friendList = {"Ali", "Saad", "Musa", "Yasir", "Zia"};
ndArrayList = new ArrayList<String>();
ndArrayList.add("Ali");
ndArrayList.add("Babar");
ndArrayList.add("Shahid");
ndArrayList.add("Yasir");
ndArrayList.add("Zain");

yAdapter = new ArrayAdapter<String>( context: this, android.R.layout.simple_list_item_1,
friendArrayList);

View.setAdapter(arrayAdapter);

View.setOnItemClickListener(new AdapterView.OnItemClickListener() {
@Override
public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
Log.d( tag: "You Selected", friendArrayList.get(i));
}
})
```



The log output at the bottom shows the following messages:

```
156/org.haqnawaz.listview D/You Selected: Ali
156/org.haqnawaz.listview D/You Selected: Babar
156/org.haqnawaz.listview D/You Selected: Shahid
```

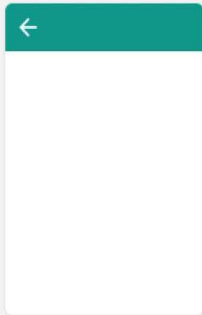


Add **new Activity**

New Android Activity

 **Configure Activity**
Android Studio 

Creates a new empty activity



Activity Name:

☒ Generate Layout File

Layout Name:

☐ Launcher Activity

Package name:

Source Language:

The name of the activity class to create



Send Data via Activity

```
listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
    @Override  
    public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {  
        Log.d( tag: "You clicked", friendArraylist.get(i));  
  
        Intent intent = new Intent( packageContext: MainActivity.this, DetailActivity.class);  
        intent.putExtra( name: "Friend Name", friendArraylist.get(i));  
        startActivity(intent);  
    }  
});
```

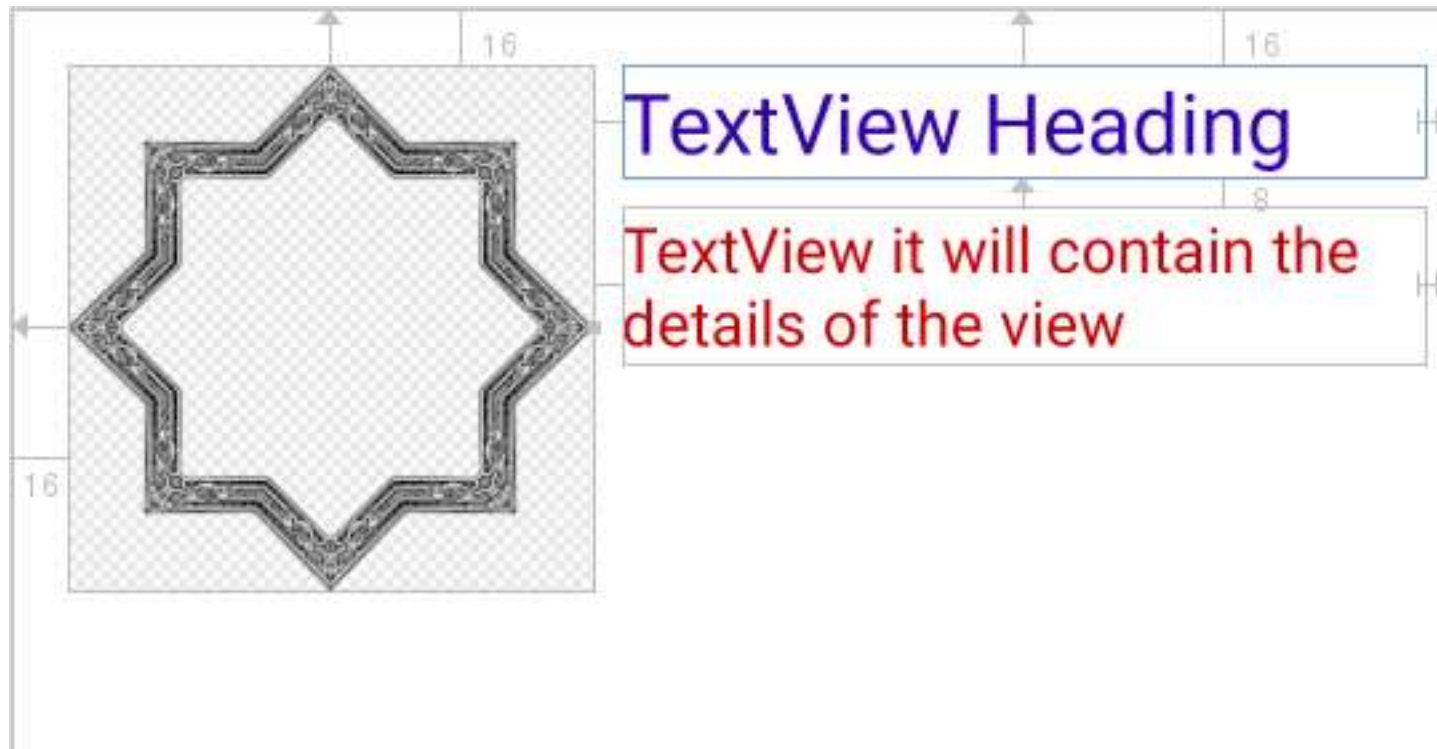


Receive Data in Activity

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_detail);
    TextView textView = findViewById(R.id.textViewDetail);
    Intent intent = getIntent();
    Log.d( tag: "Checking", intent.getStringExtra( name: "Friend Name" ));
    textView.setText(intent.getStringExtra( name: "Friend Name" ));
}
```



Customized ListView





Customized ListView

```
public class MyListView extends ArrayAdapter {
    private final Activity context;
    private final String[] maintitle;
    private final String[] subtitle;
    private final Integer[] imgid;

    public MyListView(Activity context, String[] maintitle, String[]
subtitle, Integer[] imgid) {
        super(context, R.layout.custpmized_Laout, maintitle);
        this.context=context;
        this.maintitle=maintitle;
        this.subtitle=subtitle;
        this.imgid=imgid;
    }
}
```



Customized ListView

```
public View getView(int position, View view, ViewGroup parent) {
    LayoutInflater inflater=context.getLayoutInflater();
    View singleEntityView=inflater.inflate(
R.layout.custpmized_laout, null,true);

    TextView titleHeading = singleEntityView.findViewById
(R.id.textViewCustomViewHeading);
    ImageView imageView = singleEntityView.findViewById
(R.id.imageViewCustomized);
    TextView titleDetails = singleEntityView.findViewById
(R.id.textViewCutomViewDetail);
    titleHeading.setText(maintitle[position]);
    imageView.setImageResource(imgid[position]);
    titleDetails.setText(subtitle[position]);
    return singleEntityView;
};
```




Customized ListView



Add SeekBar

SeekBar

SeekBar

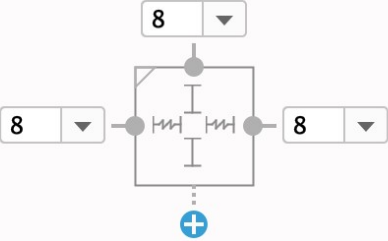
id seekBar

▼ Declared Attributes + -

layout_width	0dp	▼	0
layout_height	18dp	▼	0
layout_constraintTop	parent	▼	0
layout_constraintStart	parent	▼	0
layout_constraintEnd	parent	▼	0
layout_marginStart	8dp		0
layout_marginTop	8dp		0
layout_marginEnd	8dp		0

id seekBar

▼ Layout



The diagram shows a SeekBar widget with a central track and a slider. It is surrounded by layout constraints: a top margin of 8dp, a bottom margin of 8dp, and side margins of 8dp. The widget is connected to a parent container via a blue plus sign at the bottom.

Add SeekBar

SeekBar

SeekBar

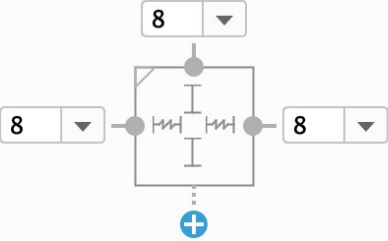
id seekBar

▼ Declared Attributes + -

layout_width	0dp	▼	0
layout_height	18dp	▼	0
layout_constraintTop	parent	▼	0
layout_constraintStart	parent	▼	0
layout_constraintEnd	parent	▼	0
layout_marginStart	8dp		0
layout_marginTop	8dp		0
layout_marginEnd	8dp		0

id seekBar

▼ Layout



The diagram shows a SeekBar widget with a blue progress bar. It is connected to a central square node with four ports. The top port is connected to a value of 8. The left and right ports are connected to values of 8. The bottom port is connected to a blue plus sign icon.



Code for SeekBar

```
SeekBar seekbar = findViewById(R.id.seekBar);
ListView listView = findViewById(R.id.listViewCounting);

seekbar.setMax(30);
seekbar.setProgress(10);

seekbar.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {
    @Override
    public void onProgressChanged(SeekBar seekBar, int i, boolean b) {

    }

    @Override
    public void onStartTrackingTouch(SeekBar seekBar) {

    }

    @Override
    public void onStopTrackingTouch(SeekBar seekBar) {

    }
});
```



Code for SeekBar

```
int min = 1;
int tableNumber;

if(i<min) {
    tableNumber = min;
    seekBar.setProgress(min);
}
else{
    tableNumber = i;
}

Toast.makeText(getApplicationContext(),Integer.toString(i),Toast.LENGTH_SHORT).show();

final ArrayList<String> tableContent = new ArrayList<String>();

for(int x = 1; x<=10; x++){
    tableContent.add(Integer.toString( x * tableNumber));
}

ArrayAdapter<String> arrayAdapter = new ArrayAdapter<String>(getApplicationContext(),android.R.layout.simple_list_item_1, tableContent );
listView.setAdapter(arrayAdapter);
}

@Override
public void onStartTrackingTouch(SeekBar seekBar) {

}

@Override
public void onStopTrackingTouch(SeekBar seekBar) {

}
```