

Menu

Himadri Parikh

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OPTIONS MENU

Options Menu

- For Options menu we require:
 - Menu resource directory
 - New menu file
 - Create menu
 - OnItemSelected for menu

Coding for Options Menu

- Create a ListView as discussed earlier

- Create a new directory under 'res' directory and name it 'menu'
- Create a new 'menu resource file', it would look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<menu
  xmlns:android="http://schemas.android.com/apk/res/android">

  </menu>
```

- Add the following code to it:

```
<item android:id="@+id/menuRed"
      android:title="RED"/>

<item android:id="@+id/menuBlue"
      android:title="BLUE"/>
```

- For Sub menu code the following:

```
<item android:id="@+id/menuMore"
      android:title="More">
  <menu>
    <item android:id="@+id/menuYellow"
          android:title="YELLOW"/>

    <item android:id="@+id/menuCyan"
          android:title="CYAN"/>
  </menu>
</item>
```

- Make instance of your Layout(Constraint Layout in this case):
ConstraintLayout myLayout = findViewById(R.id.myLayout);
- Create the Menu by following code:

```
@Override
public boolean onCreateOptionsMenu(Menu menu) {
  MenuInflater inflater = getMenuInflater();
  inflater.inflate(R.menu.my_options_menu, menu);
  return true;
}
```

- Create onOptionsItemSelected listener:

@Override

```
public boolean onOptionsItemSelected(MenuItem item) {  
    switch (item.getItemId()) {  
        case R.id.menuRed:  
            myLayout.setBackgroundColor(Color.RED);  
            return true;  
  
        case R.id.menuBlue:  
            myLayout.setBackgroundColor(Color.BLUE);  
            return true;  
  
        case R.id.menuYellow:  
            myLayout.setBackgroundColor(Color.YELLOW);  
            return true;  
  
        case R.id.menuCyan:  
            myLayout.setBackgroundColor(Color.CYAN);  
            return true;  
        case R.id.menuMore:  
            Toast.makeText(this, "Loading more items..." , Toast.LENGTH_SHORT )  
                .show();  
            return true;  
  
        default:  
            return super.onOptionsItemSelected(item);  
    }  
}
```

CONTEXT MENU

Context Menu

- For Context menu we require:
 - ListView(you may use any other component/view)
 - Array Adapter
 - Menu resource directory
 - New menu file
 - Register menu with view
 - Create menu
 - OnItemSelected for menu

Coding for context menu

- Create a ListView as discussed earlier,
 - Use the following resource for data:
 - ```
List<String> myList = new ArrayList<>();
myList.add("Apple");
myList.add("Orange");
myList.add("Mango");
myList.add("Litchi");
myList.add("Grapes");
```
- Create a new directory under 'res' directory and name it 'menu'
- Create a new 'menu resource file', it would look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<menu
 xmlns:android="http://schemas.android.com/apk/res/android">

 </menu>
```

- Add the following code to it:

```
<item android:id="@+id/menuAdd"
 android:title="Add Item"/>
```

```
<item android:id="@+id/menuUpdate"
 android:title="Update Item"/>
```

```
<item android:id="@+id/menuDelete"
 android:title="Delete Item"/>
```

- It's time we add code for Contextual Menu.

- Implement a MultiChoiceModeListener in MainActivity.java

```
AbsListView.MultiChoiceModeListener modeListener = new
AbsListView.MultiChoiceModeListener() {
```

```
 @Override
```

```
 public void onItemCheckedStateChanged(ActionMode actionMode, int i,
long l, boolean b) { }
```

```
 @Override
```

```
 public boolean onCreateActionMode(ActionMode actionMode, Menu menu)
{ return true; }
```

```
 @Override
```

```
 public boolean onPrepareActionMode(ActionMode actionMode, Menu menu)
{ return false; }
```

```
 @Override
```

```
 public boolean onActionItemClicked(ActionMode actionMode, MenuItem
menuItem) { return false; }
```

```
 @Override
```

```
 public void onDestroyActionMode(ActionMode actionMode) { }
```

```
};
```

- Now add the following code in onCreateActionMode:

```
public boolean onCreateActionMode(ActionMode actionMode, Menu menu) {
 MenuInflater inflater = actionMode.getMenuInflater();
 inflater.inflate(R.menu.my_context_menu, menu);
 return true;
}
```

- In onCreate() add code for registering the listView:

```
lvList.setChoiceMode(AbsListView.CHOICE_MODE_MULTIPLE_MODAL);
lvList.setMultiChoiceModeListener(modeListener);

adt = new ArrayAdapter<String>(MainActivity.this,
 android.R.layout.simple_list_item_1, FRUITS);
lvList.setAdapter(adt);
```

- Create a method that helps remove item:

```
public void removeItems(List<String> items){
 for(String item : items){
 FRUITS.remove(item);
 }
 adt.notifyDataSetChanged();
}
```

- For userSelection we need one more ArrayList to be declared in MainActivity:

```
private ArrayList<String> userSelection = new ArrayList<>();
```

- The code for Items getting selected goes in onItemClickStateChecked of MultiChoiceModeListener:

```
position = i;
if(userSelection.contains(FRUITS.get(i))) {
 userSelection.remove(FRUITS.get(i));
}
else {
 userSelection.add(FRUITS.get(i));
}
actionMode.setTitle(userSelection.size()+" items selected..");
```

- We need to call methods, depending on the user menu option selection, code to be added in `onOptionsItemSelected`:

```
info = (AdapterView.AdapterContextMenuInfo)
menuItem.getMenuInfo();
```

```
switch (menuItem.getItemId()){
 case R.id.menuDelete:
 removeItems(userSelection);
 actionMode.finish();
 return true;
 case R.id.menuUpdate:
 openDialogue(position);
 default:
 return false;
}
```

- We need to flush the user selection for fresh input:

```
public void onDestroyActionMode(ActionMode actionMode) {
 userSelection.clear();
}
```

- Create a switch case for itemSelected:  
**switch (item.getItemId()) {**  
**}**
- Create cases as below:
  - Case for Update:  
**case R.id.menuUpdate:**  
**openDialog();**  
**myList.set(info.position, text);**  
**return true;**
  - Case for Delete:  
**case R.id.menuDelete:**  
**removeItems(list);**  
**adapter.notifyDataSetChanged();**  
**return true;**
  - Default case:  
**default:**  
**return super.onContextItemSelected(item);**
- Here note that you need to create the openDialog method in MainActivity, just press alt+enter and create the method, we will discuss about it later.



Modified in for Add/Update in this case

# **ALERT DIALOG**

# Alert Dialog

- Here we are designing the Alert Dialog for our Context menu Item selected
- Create a new method as shown below:

```
private void openDialogAdd() { }
```

- Create an instance of Builder to build the Alert Dialog://in openDialogAdd()

```
AlertDialog.Builder builder = new AlertDialog.Builder(this);
```

- We need editText and a Layout for AlertDialog:

```
final EditText editText = new EditText(getApplicationContext());
```

```
LinearLayout.LayoutParams lp = new LinearLayout.LayoutParams(
 LinearLayout.LayoutParams.MATCH_PARENT,
 LinearLayout.LayoutParams.MATCH_PARENT);
```

```
editText.setLayoutParams(lp);
```

- Using builder, build the AlertDialog:

```
builder.setView(edtText)
```

```
.setTitle("Add Elements Dialog")
```

```
.setPositiveButton("Add", new DialogInterface.OnClickListener() {
 @Override
```

```
 public void onClick(DialogInterface dialog, int which) {
 myList.add(edtText.getText().toString());
 adapter.notifyDataSetChanged();
```

```
 }
```

```
});
```

```
.setNegativeButton("Cancel", new DialogInterface.OnClickListener() {
 @Override
```

```
 public void onClick(DialogInterface dialog, int which) {
 Toast.makeText(getApplicationContext(), "Action Cancelled",
 Toast.LENGTH_SHORT).show();
```

```
 }
```

```
});
```

- Inorder to show the AlertDialog we make use of show() method:

```
builder.show();
```

- Similarly we can create update method replacing the following code:

```
.setPositiveButton("Add", new DialogInterface.OnClickListener() {
 @Override
 public void onClick(DialogInterface dialog, int which) {
 int pos = info.position;
 myList.remove(pos);
 myList.add(pos, edtText.getText().toString());
 adapter.notifyDataSetChanged();
 }
})
```



Himadri Vrajesh Parikh  
[himadrichaudhary1314@gmail.com](mailto:himadrichaudhary1314@gmail.com)  
<https://www.linkedin.com/in/himadri-parikh-506219109/>