CS E-76: Building Mobile Applications

Intents, Menus, and SharedPreferences

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Using intents to start a second Activity

• Remember to add new Activity(s) to AndroidManifest.xml!

• Intent intent = new Intent(Context packageContext, Class<?> class);
  – packageContext = the activity we’re coming from
  – Class: the Activity in our app we’re going to

• Intent intent = new Intent(this, AnotherActivity.class);

• startActivity(i);
Requesting and Starting Another App’s Activity

- Intent intent = new Intent(<action>, <data>);
  - ACTION_VIEW, ACTION_EDIT, ACTION_DIAL
  - scheme://host/data/segments

- Intent intent = new Intent(Intent.ACTION_DIAL, Uri.parse("tel:1234567890"));
Activity Results

• `startActivityForResult(intent)` allows us to “return” data to the calling Activity

• `onActivityResult(requestCode, resultCode, data);`
  – `requestCode`: unique integer to determine what Activity returned
  – `resultCode`: RESULT_OK, RESULT_CANCELED
  – `data`: Intent to receive additional data
Activity Results (cont’d)

• `setResult(int resultCode, Intent data);`
  – `resultCode`: RESULT_OK, RESULT_CANCELED
  – `data`: Intent to pass additional data

• `finish()` pops from stack and sends control back to previous Activity
Bundles

• Bundle objects store key and value pairs via the put<type> methods and get<type> methods
  – Basic data types: Boolean, Byte, Char, Double, Float, Int, Long, etc.
  – Non-primitives: String, Serializable, Arrays
• Can get size() and keySet()
Bundles (cont’d)

• `intent.putExtras(Bundle bundle);`
  – Associate a bundle with an intent
• `getIntent().getExtras();`
  – Get bundle associated with an intent
• `intent.putExtra(String key, value);`
  – `intent.getExtra(String key);`
Menus

• Described in XML, stored in res/menu
• <menu> has many <item> children
• Accessed like other resources (R.menu.<filename>)
Menus (cont’d)

• `onCreateOptionsMenu(Menu menu)`
  – User presses menu button on device

• `onCreateContextMenu(ContextMenu menu, View v, ContextMenuInfo menuInfo)`
  – User holds down a view (right-clicking/long press)
  – Need to registerForContextMenu(View v)
Menus

- `onOptionsItemSelected(MenuItem item)`
  - User selects an option from the menu coming from the menu button

- `onContextItemSelected(MenuItem item)`
  - User selected an option from a context menu

- `Item.getItemId()`
  - Gets ID of selected item
Submenus

• <item> elements can also contain other <menu> items!

• When <item> is selected, a submenu will open as a context menu
SharedPreferences

- Lightweight key-value pair storage
- General framework that allows you to save and retrieve persistent key-value pairs of primitive data types.
- Use it to save any primitive data: booleans, floats, ints, longs, and strings.
- Persist amongst user sessions
Get your SharedPreferences

• `getSharedPreferences()` – Use this if you need multiple preferences files identified by name where you specify with the first parameter

• `getPreferences()` – Use this if you need only one preferences file for your Activity. Since this will be the only preferences file for your Activity, you don’t supply a name
Write to your SharedPreferences

• Get a SharedPreferences.Editor
  – Call edit()
  – Add values with methods (put<type>())
  – Commit new values with commit()
Read from your SharedPreferences

• Use SharedPreferences methods (get<type>()) to grab the values from your preferences
• EX: getBoolean(key, defaultvalue);