**Lab 3 Assignment**

**Question 1: Using Fragments**

A picture containing text, screenshot, font, document

Description automatically generated

1. <?xml version="1.0" encoding="utf-8"?>
2. <LinearLayout android:orientation="vertical"
3. xmlns:android="http://schemas.android.com/apk/res/android"
4. xmlns:tools="http://schemas.android.com/tools"
5. android:layout\_width="match\_parent"
6. android:layout\_height="match\_parent"
7. tools:context="com.example.fragments.MainActivity">
8. <fragment
9. android:name="com.example.fragments.Fragment1"
10. android:id="@+id/fragment1"
11. android:layout\_weight="1"
12. android:layout\_width="fill\_parent"
13. android:layout\_height="match\_parent" />
14. <fragment
15. android:name="com.example.fragments.Fragment2"
16. android:id="@+id/fragment2"
17. android:layout\_weight="1"
18. android:layout\_width="fill\_parent"
19. android:layout\_height="match\_parent" />
20. </LinearLayout>

A picture containing text, receipt, font, white

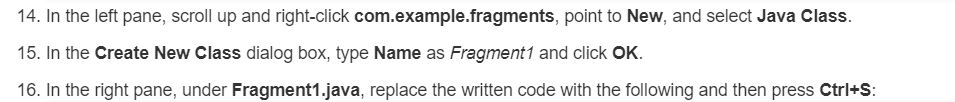
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4. android:orientation="vertical"
5. android:layout\_width="fill\_parent"
6. android:layout\_height="fill\_parent"
7. android:background="#00FF00"
8. >
9. <TextView
10. android:layout\_width="fill\_parent"
11. android:layout\_height="wrap\_content"
12. android:text="This is fragment #1"
13. android:textColor="#000000"
14. android:textSize="25sp"/>
15. </LinearLayout>

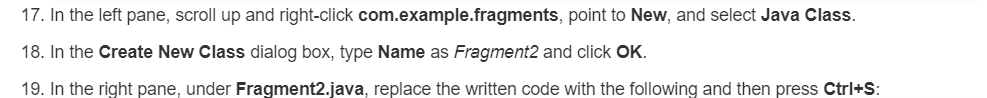
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6. android:layout\_height="fill\_parent"
7. android:background="#FFFE00"
8. >
9. <TextView
10. android:layout\_width="fill\_parent"
11. android:layout\_height="wrap\_content"
12. android:text="This is fragment #2"
13. android:textColor="#000000"
14. android:textSize="25sp"/>
15. </LinearLayout>



1. package com.example.fragments;
2. import android.app.Fragment;
3. import android.os.Bundle;
4. import android.view.LayoutInflater;
5. import android.view.View;
6. import android.view.ViewGroup;
7. public class Fragment1 extends Fragment {
8. @Override
9. public View onCreateView(LayoutInflater inflater,
10. ViewGroup container, Bundle savedInstanceState) {
11. //---Inflate the layout for this fragment---
12. return inflater.inflate(
13. R.layout.fragment1, container, false);
14. }
15. }



1. package com.example.fragments;
2. import android.app.Fragment;
3. import android.os.Bundle;
4. import android.view.LayoutInflater;
5. import android.view.View;
6. import android.view.ViewGroup;
7. public class Fragment2 extends Fragment {
8. @Override
9. public View onCreateView(LayoutInflater inflater,
10. ViewGroup container, Bundle savedInstanceState) {
11. //---Inflate the layout for this fragment---
12. return inflater.inflate(
13. R.layout.fragment2, container, false);
14. }
15. }

A screenshot of a computer

Description automatically generated with low confidence

**Question 2: Adding Fragments During Runtime**

A picture containing text, screenshot, font, document

Description automatically generated

1. <?xml version="1.0" encoding="utf-8"?>
2. <LinearLayout android:orientation="vertical"
3. xmlns:android="http://schemas.android.com/apk/res/android"
4. xmlns:tools="http://schemas.android.com/tools"
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6. android:layout\_height="match\_parent"
7. tools:context="com.example.fragments.MainActivity">
8. <!--
9. <fragment
10. android:name="com.example.fragments.Fragment1"
11. android:id="@+id/fragment1"
12. android:layout\_weight="1"
13. android:layout\_width="fill\_parent"
14. android:layout\_height="match\_parent"/>
15. <fragment
16. android:name="com.example.fragments.Fragment2"
17. android:id="@+id/fragment2"
18. android:layout\_weight="1"
19. android:layout\_width="fill\_parent"
20. android:layout\_height="match\_parent"/>
21. -->
22. </LinearLayout>

A picture containing screenshot, text, font

Description automatically generated

1. package com.example.fragments;
2. import android.app.Activity;
3. import android.app.FragmentManager;
4. import android.app.FragmentTransaction;
5. import android.os.Bundle;
6. import android.util.DisplayMetrics;
7. public class MainActivity extends Activity {
8. /\*\* Called when the activity is first created. \*/
9. @Override
10. public void onCreate(Bundle savedInstanceState) {
11. super.onCreate(savedInstanceState);
12. FragmentManager fragmentManager = getFragmentManager();
13. FragmentTransaction fragmentTransaction =
14. fragmentManager.beginTransaction();
15. //---get the current display info---
16. DisplayMetrics display = this.getResources().getDisplayMetrics();
17. int width = display.widthPixels;
18. int height = display.heightPixels;
19. if (width> height)
20. {
21. //---landscape mode---
22. Fragment1 fragment1 = new Fragment1();
23. // android.R.id.content refers to the content
24. // view of the activity
25. fragmentTransaction.replace(
26. android.R.id.content, fragment1);
27. }
28. else
29. {
30. //---portrait mode---
31. Fragment2 fragment2 = new Fragment2();
32. fragmentTransaction.replace(
33. android.R.id.content, fragment2);
34. }
35. fragmentTransaction.commit();
36. }
37. }

A picture containing text, receipt, font, screenshot

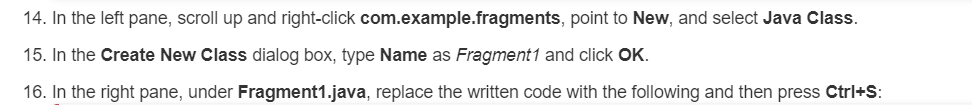
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1. <?xml version="1.0" encoding="utf-8"?>
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11. android:layout\_height="wrap\_content"
12. android:text="This is fragment #1"
13. android:textColor="#000000"
14. android:textSize="25sp"/>
15. </LinearLayout>

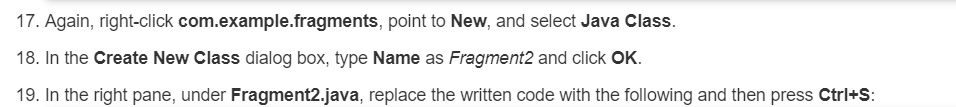
A picture containing text, font, receipt, white

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7. android:background="#FFFE00"
8. >
9. <TextView
10. android:layout\_width="fill\_parent"
11. android:layout\_height="wrap\_content"
12. android:text="This is fragment #2"
13. android:textColor="#000000"
14. android:textSize="25sp"/>
15. </LinearLayout>



1. package com.example.fragments;
2. import android.app.Fragment;
3. import android.os.Bundle;
4. import android.view.LayoutInflater;
5. import android.view.View;
6. import android.view.ViewGroup;
7. public class Fragment1 extends Fragment {
8. @Override
9. public View onCreateView(LayoutInflater inflater,
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12. return inflater.inflate(
13. R.layout.fragment1, container, false);
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2. import android.app.Fragment;
3. import android.os.Bundle;
4. import android.view.LayoutInflater;
5. import android.view.View;
6. import android.view.ViewGroup;
7. public class Fragment2 extends Fragment {
8. @Override
9. public View onCreateView(LayoutInflater inflater,
10. ViewGroup container, Bundle savedInstanceState) {
11. //---Inflate the layout for this fragment---
12. return inflater.inflate(
13. R.layout.fragment2, container, false);
14. }
15. }

A screenshot of a computer

Description automatically generated with medium confidence

**Question 3: Understanding the Life Cycle of a Fragment**

A picture containing text, screenshot, font, document

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1. <?xml version="1.0" encoding="utf-8"?>
2. <LinearLayout android:orientation="vertical"
3. xmlns:android="http://schemas.android.com/apk/res/android"
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5. import android.os.Bundle;
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7. public class MainActivity extends Activity {
8. /\*\* Called when the activity is first created. \*/
9. @Override
10. public void onCreate(Bundle savedInstanceState) {
11. super.onCreate(savedInstanceState);
12. FragmentManager fragmentManager = getFragmentManager();
13. FragmentTransaction fragmentTransaction =
14. fragmentManager.beginTransaction();
15. //---get the current display info---
16. DisplayMetrics display = this.getResources().getDisplayMetrics();
17. int width = display.widthPixels;
18. int height = display.heightPixels;
19. if (width> height)
20. {
21. //---landscape mode---
22. Fragment1 fragment1 = new Fragment1();
23. // android.R.id.content refers to the content
24. // view of the activity
25. fragmentTransaction.replace(
26. android.R.id.content, fragment1);
27. }
28. else
29. {
30. //---portrait mode---
31. Fragment2 fragment2 = new Fragment2();
32. fragmentTransaction.replace(
33. android.R.id.content, fragment2);
34. }
35. fragmentTransaction.commit();
36. }
37. }

A screenshot of a computer

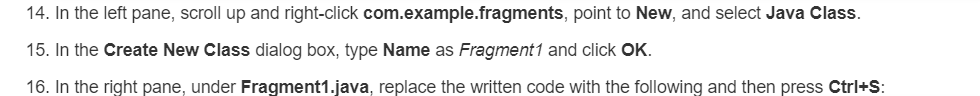
Description automatically generated with low confidence

1. <?xml version="1.0" encoding="utf-8"?>
2. <LinearLayout
3. xmlns:android="http://schemas.android.com/apk/res/android"
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14. android:textSize="25sp"/>
15. </LinearLayout>

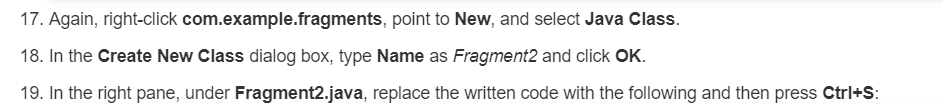
A picture containing text, font, white, screenshot

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6. android:layout\_height="fill\_parent"
7. android:background="#FFFE00"
8. >
9. <TextView
10. android:layout\_width="fill\_parent"
11. android:layout\_height="wrap\_content"
12. android:text="This is fragment #2"
13. android:textColor="#000000"
14. android:textSize="25sp"/>
15. </LinearLayout>



1. package com.example.fragments;
2. import android.app.Activity;
3. import android.app.Fragment;
4. import android.os.Bundle;
5. import android.util.Log;
6. import android.view.LayoutInflater;
7. import android.view.View;
8. import android.view.ViewGroup;
9. public class Fragment1 extends Fragment {
10. @Override
11. public View onCreateView(LayoutInflater inflater,
12. ViewGroup container, Bundle savedInstanceState) {
13. Log.d("Fragment 1", "onCreateView");
14. //---Inflate the layout for this fragment---
15. return inflater.inflate(
16. R.layout.fragment1, container, false);
17. }
18. @Override
19. public void onAttach(Activity activity) {
20. super.onAttach(activity);
21. Log.d("Fragment 1", "onAttach");
22. }
23. @Override
24. public void onCreate(Bundle savedInstanceState) {
25. super.onCreate(savedInstanceState);
26. Log.d("Fragment 1", "onCreate");
27. }
28. @Override
29. public void onActivityCreated(Bundle savedInstanceState) {
30. super.onActivityCreated(savedInstanceState);
31. Log.d("Fragment 1", "onActivityCreated");
32. }
33. @Override
34. public void onStart() {
35. super.onStart();
36. Log.d("Fragment 1", "onStart");
37. }
38. @Override
39. public void onResume() {
40. super.onResume();
41. Log.d("Fragment 1", "onResume");
42. }
43. @Override
44. public void onPause() {
45. super.onPause();
46. Log.d("Fragment 1", "onPause");
47. }
48. @Override
49. public void onStop() {
50. super.onStop();
51. Log.d("Fragment 1", "onStop");
52. }
53. @Override
54. public void onDestroyView() {
55. super.onDestroyView();
56. Log.d("Fragment 1", "onDestroyView");
57. }
58. @Override
59. public void onDestroy() {
60. super.onDestroy();
61. Log.d("Fragment 1", "onDestroy");
62. }
63. @Override
64. public void onDetach() {
65. super.onDetach();
66. Log.d("Fragment 1", "onDetach");
67. }
68. }



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12. return inflater.inflate(
13. R.layout.fragment2, container, false);
14. }
15. }

A screenshot of a computer program

Description automatically generated with medium confidence

1. D/Fragment 1(2995): onPause
2. D/Fragment 1(2995): onStop

A screenshot of a computer

Description automatically generated with low confidence

1. D/Fragment 1(2995): onPause
2. D/Fragment 1(2995): onStop
3. D/Fragment 1(2995): onDestroyView
4. D/Fragment 1(2995): onDestroy
5. D/Fragment 1(2995): onDetach

A picture containing text, screenshot, font, algebra

Description automatically generated

**Submission requirement**: *You are to provide a complete screenshot of your step-by-step application in a word document and a zip file of your code. Push your project files to a new github.com repo and submit the GitHub link. Create a 3 to 5-minute LOOM video (*[*https://www.loom.com/)*](https://www.loom.com/)) *in which you explain the execution of your programs. Be sure to address any challenges encountered and new information learned while completing this assignment. Be sure to test your results carefully.*