**스마트폰 응용 프로그래밍**

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| 과제 내용 |
| 자신이 만들 앱 스케치 하기: 자신이 만들 앱을 안드로이드 스튜디오를 이용 해 사용자 인터페이스 제작까지 해볼 것. |

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| 프로젝트 명 | Study Voca |
| 프로젝트  설명 | 영단어를 공부하는 프로그램을 작성 해 보자.  Main Activity에서 로그인, 학습 시작, 프로그램 종료의 메뉴를 만든다.  학습을 시작하면 화면에 문제가 출력된다.  사용자는 문제 화면에서 객관식으로 정답을 터치하여 맞힐 수 있다.  문제 화면 위쪽에 Seek Bar를 통해 진행도를 확인할 수 있도록 한다.  문제 화면 아래쪽에는 [이전], [힌트 보기], [정답 보기]등 몇 가지 버튼을 추가해 메뉴를 이용할 수 있도록 한다. |

**1. 메인화면 activity\_main.xml**

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| 코드 | 디자인 |
| <?xml version="1.0" encoding="utf-8"?> <androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  xmlns:app="http://schemas.android.com/apk/res-auto"  xmlns:tools="http://schemas.android.com/tools"  android:layout\_width="match\_parent"  android:layout\_height="match\_parent"  android:background="#1C85D8"  tools:context=".MainActivity">   <!--로그인 버튼-->  <Button  android:id="@+id/button2"  android:layout\_width="0dp"  android:layout\_height="0dp"  android:layout\_marginStart="73dp"  android:layout\_marginEnd="73dp"  android:layout\_marginBottom="10dp"  android:background="#C17AD1F8"  android:onClick="Clicked"  android:text="@string/login"  android:textSize="9pt"  app:layout\_constraintBottom\_toTopOf="@+id/button"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/imageView" />   <!--시작 버튼-->  <Button  android:id="@+id/button"  android:layout\_width="0dp"  android:layout\_height="0dp"  android:layout\_marginStart="73dp"  android:layout\_marginEnd="73dp"  android:layout\_marginBottom="10dp"  android:background="#C17AD1F8"  android:text="@string/start"  android:textSize="9pt"  app:layout\_constraintBottom\_toTopOf="@+id/button1"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/button2" />   <!--종료 버튼-->  <Button  android:id="@+id/button1"  android:layout\_width="0dp"  android:layout\_height="0dp"  android:layout\_marginStart="73dp"  android:layout\_marginEnd="73dp"  android:layout\_marginBottom="28dp"  android:background="#C17AD1F8"  android:text="@string/escape"  android:textSize="9pt"  app:layout\_constraintBottom\_toBottomOf="parent"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/button" />    <TextView  android:id="@+id/textView"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginTop="35dp"  android:layout\_marginBottom="9dp"  android:text="@string/study\_voca"  android:textAllCaps="true"  android:textColor="@color/white"  android:textSize="23pt"  android:textStyle="bold"  app:layout\_constraintBottom\_toTopOf="@+id/textView2"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toTopOf="parent" />   <ImageView  android:id="@+id/imageView"  android:layout\_width="300dp"  android:layout\_height="256dp"  android:layout\_marginStart="69dp"  android:layout\_marginEnd="69dp"  android:layout\_marginBottom="24dp"  app:layout\_constraintBottom\_toTopOf="@+id/button2"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/textView2"  app:srcCompat="@drawable/logo" />   <TextView  android:id="@+id/textView2"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginBottom="27dp"  android:text="@string/since"  android:textColor="#E3E3E3"  android:textSize="12pt"  android:textStyle="bold"  app:layout\_constraintBottom\_toTopOf="@+id/imageView"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/textView" />   </androidx.constraintlayout.widget.ConstraintLayout> |  |

**2. 문제 풀이 화면 activity\_solvingquiz.xml**

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| 코드 | 디자인 |
| <?xml version="1.0" encoding="utf-8"?> <androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  xmlns:app="http://schemas.android.com/apk/res-auto"  xmlns:tools="http://schemas.android.com/tools"  android:layout\_width="match\_parent"  android:layout\_height="match\_parent"  android:background="#1C85D8"  tools:context=".solvingquiz">   <SeekBar  android:id="@+id/seekBar2"  style="@style/Widget.AppCompat.SeekBar.Discrete"  android:layout\_width="0dp"  android:layout\_height="0dp"  android:layout\_marginStart="15dp"  android:layout\_marginTop="16dp"  android:layout\_marginEnd="15dp"  android:layout\_marginBottom="267dp"  android:background="#6AFFFFFF"  android:max="10"  android:progress="3"  app:layout\_constraintBottom\_toTopOf="@+id/textView5"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toTopOf="parent" />   <View  android:id="@+id/view"  android:layout\_width="0dp"  android:layout\_height="182dp"  android:layout\_marginStart="24dp"  android:layout\_marginTop="18dp"  android:layout\_marginEnd="24dp"  android:background="#E8FFFFFF"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/seekBar2" />   <View  android:id="@+id/view1"  android:layout\_width="0dp"  android:layout\_height="182dp"  android:layout\_marginStart="24dp"  android:layout\_marginTop="200dp"  android:layout\_marginEnd="24dp"  android:background="#FFFFFF"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintHorizontal\_bias="0.0"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/seekBar2" />   <TextView  android:id="@+id/textView3"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginStart="38dp"  android:layout\_marginBottom="527dp"  android:text="@string/problem"  android:textColor="@color/black"  android:textSize="12pt"  app:layout\_constraintBottom\_toBottomOf="parent"  app:layout\_constraintStart\_toStartOf="@+id/view"  app:layout\_constraintTop\_toBottomOf="@+id/seekBar2"  tools:text="@string/problem" />   <View  android:id="@+id/view2"  android:layout\_width="0dp"  android:layout\_height="0dp"  android:layout\_marginEnd="18dp"  android:layout\_marginBottom="118dp"  android:background="#8D75984B"  app:layout\_constraintBottom\_toTopOf="@+id/textView6"  app:layout\_constraintEnd\_toStartOf="@+id/textView5"  app:layout\_constraintStart\_toEndOf="@+id/textView4"  app:layout\_constraintTop\_toBottomOf="@+id/textView5" />   <TextView  android:id="@+id/textView4"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginStart="67dp"  android:layout\_marginEnd="24dp"  android:text="@string/problemen1"  android:textColor="@color/black"  android:textSize="12pt"  app:layout\_constraintEnd\_toStartOf="@+id/view2"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toTopOf="@+id/view2" />   <TextView  android:id="@+id/textView5"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginEnd="75dp"  android:text="@string/problemen2"  android:textColor="@color/black"  android:textSize="12pt"  app:layout\_constraintBottom\_toTopOf="@+id/view2"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toEndOf="@+id/view2"  app:layout\_constraintTop\_toBottomOf="@+id/seekBar2" />   <View  android:id="@+id/view3"  android:layout\_width="0dp"  android:layout\_height="153dp"  android:layout\_marginStart="27dp"  android:layout\_marginTop="96dp"  android:layout\_marginEnd="27dp"  android:layout\_marginBottom="98dp"  android:background="#DEFFC807"  app:layout\_constraintBottom\_toBottomOf="parent"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toStartOf="parent"  app:layout\_constraintTop\_toBottomOf="@+id/view2" />   <TextView  android:id="@+id/textView6"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginStart="35dp"  android:layout\_marginBottom="4dp"  android:text="@string/ans1"  android:textColor="@color/black"  android:textSize="12pt"  app:layout\_constraintBottom\_toTopOf="@+id/textView7"  app:layout\_constraintStart\_toStartOf="@+id/view3"  app:layout\_constraintTop\_toBottomOf="@+id/view2" />   <TextView  android:id="@+id/textView8"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginBottom="36dp"  android:text="@string/ans3"  android:textColor="@color/black"  android:textSize="12pt"  app:layout\_constraintBottom\_toTopOf="@+id/button5"  app:layout\_constraintStart\_toStartOf="@+id/textView7"  app:layout\_constraintTop\_toBottomOf="@+id/textView7" />   <TextView  android:id="@+id/textView7"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginBottom="4dp"  android:text="@string/ans2"  android:textColor="@color/black"  android:textSize="12pt"  app:layout\_constraintBottom\_toTopOf="@+id/textView8"  app:layout\_constraintStart\_toStartOf="@+id/textView6"  app:layout\_constraintTop\_toBottomOf="@+id/textView6" />   <Button  android:id="@+id/button3"  android:layout\_width="0dp"  android:layout\_height="48dp"  android:layout\_marginStart="27dp"  android:background="#E8582F9F"  android:text="@string/prev"  android:textSize="10pt"  app:layout\_constraintBaseline\_toBaselineOf="@+id/button4"  app:layout\_constraintEnd\_toStartOf="@+id/button4"  app:layout\_constraintStart\_toStartOf="parent" />   <Button  android:id="@+id/button4"  android:layout\_width="0dp"  android:layout\_height="0dp"  android:layout\_marginBottom="38dp"  android:background="#E8582F9F"  android:text="@string/hint"  android:textSize="10pt"  app:layout\_constraintBottom\_toBottomOf="parent"  app:layout\_constraintEnd\_toStartOf="@+id/button5"  app:layout\_constraintStart\_toEndOf="@+id/button3"  app:layout\_constraintTop\_toBottomOf="@+id/button5" />   <Button  android:id="@+id/button5"  android:layout\_width="0dp"  android:layout\_height="0dp"  android:layout\_marginEnd="29dp"  android:background="#E8582F9F"  android:text="@string/givup"  android:textSize="10pt"  app:layout\_constraintBottom\_toTopOf="@+id/button4"  app:layout\_constraintEnd\_toEndOf="parent"  app:layout\_constraintStart\_toEndOf="@+id/button4"  app:layout\_constraintTop\_toBottomOf="@+id/textView8" />   </androidx.constraintlayout.widget.ConstraintLayout> |  |

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| 프로젝트 개선방향 / 추가 기능 고려 |
| 우선은 메인 화면과 문제 풀이 두 가지 UI를 작성하였으나, 앞으로 여러가지 추가사항들을 고려하며 차근차근 디벨롭 할 예정.  1. 문제 풀이에 키보드 이용 기능 2. 오답 노트 기능 등 |

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| 첫 과제 수행 중 특이사항 |
| |  | | --- | | <style name="Base.Theme.MyFirstApplication" parent="Theme.AppCompat"> |   일반적으로, 팔레트에서 Button 위젯을 가져와 프로그램을 작성한 뒤, Button의 android:background 속성을 변경해도 버튼의 색깔이 바뀌지 않았다.  서칭을 해 본 결과, 수업 시간에 교수님께서 언급하신 방법 외에도 values 폴더 / themes 폴더 안의 themes.xml 파일의 해당 문장에서  parent=”Theme.AppCompat” 부분을 변경해주는 방법을 찾게되었고, 이를 적용해서 문제를 해결하였다. |

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