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CSCI 395.85 Term Project

Application Name:

Taallam

Purpose:

The Taallam is created with the intention for the user to learn about the Arabic language and engage with three categories: letters (28), words, and sentences

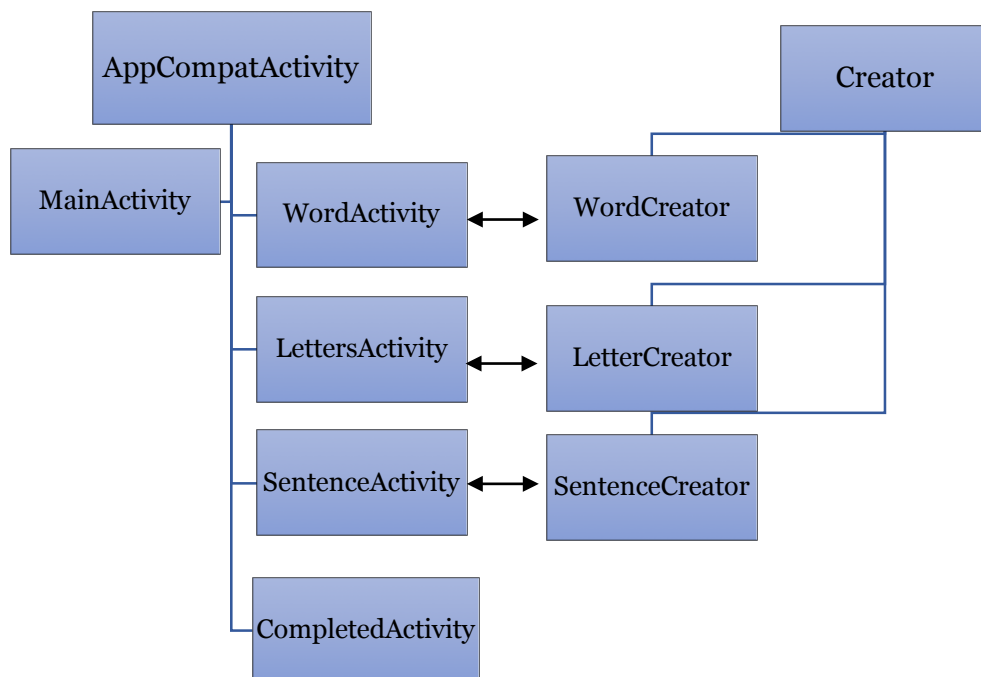
Features:

❖ The initial screen of the Taallam app starts off with displaying 3 options to the user:

Letters, Words, Sentences

- a. *Letters*: when the user taps on Letters, an activity launches displaying 4 Arabic letters and to choose the correct letter that corresponds to the correct audio. All letters are displayed in a random and unordered fashion – hence the Arabic letters won't be displayed in a random order which will make it challenging for the user. There are 28 questions because there are 28 letters in the Arabic alphabet
- b. *Words*: a photo is displayed on the left side, with four words in Arabic displayed on the right side. The user must choose the correct word that corresponds to the photo. Just like letters, it's displayed randomly without any particular order. For the sake of simplicity and to demonstrate functionality, 5 questions are displayed.
- c. *Sentences*: a sentence in English is displayed, along with 4 Arabic sentences. The user must select the Arabic sentence that corresponds to the sentence in English. It's also displayed randomly without any particular order. For the sake of simplicity and to demonstrate functionality, 9 questions are displayed.

- ❖ Once the user completes any of the specific activities, an additional activity will appear at the end to indicate completion. The total number of questions the user answered correctly out of all the questions will be displayed, along with 3 options – *Continue, Start Over, Main Menu*
 - a. *Continue*: this option will **only** be presented if the user answered any of the questions incorrectly. By tapping on Continue, the user will have an opportunity to re-do those questions he/she answered incorrectly.
 - b. *Start Over*: if the user taps on this option, then he/she will be starting the *Letters, Words, or Sentences* activity over from scratch and attempt to answer all the questions again.
 - c. *Main Menu*: if the user taps on this option, then he/she will return to the main menu and will be presented with the option to start the *Letters, Words* or *Sentences* activity
- ❖ Below is a hierarchy chart displaying how all the classes implemented interact with one another



User Interface

- ❖ *Main Activity* – 3 buttons
 - *Letters Button* – when clicked on, links to LettersActivity
 - *Words Button* – when clicked on, links to WordsActivity
 - *Sentences Button* – when clicked on, links to SentenceActivity

- ❖ *Letters Activity* – clickable sound icon, 2 texts, 4 clickable texts
 - *Clickable sound icon* – tapping on this icon will allow audio sounding out letter to play
 - *2 Texts* – this informs the user in both Arabic and English of the activity and what to do
 - *4 clickable texts* – these are the 4 choices displayed to the user, and the user must select one to proceed onto the next question

- ❖ *Word Activity* – 2 texts, image, 4 clickable texts
 - *2 Texts* – this informs the user in both Arabic and English of the activity and what to do
 - *4 clickable texts* – these are the 4 choices displayed to the user, and the user must select one to proceed onto the next question
 - *image* – an image is displayed in which user must select one of the 4 clickable texts to correspond to the photo

- ❖ *Sentences Activity* – 3 texts, 4 clickable texts
 - *4 clickable texts* – these are the 4 choices displayed to the user, and the user must select one to proceed onto the next question
 - *3 texts* – the first two inform user in both Arabic and English of the activity and what to do; the last text is an English sentence that's displayed and the user must select the correct sentence in Arabic that corresponds to the English sentence

- ❖ *Completed Activity* – text, 3 buttons

- *Text* – the amount of questions answered correctly by the user is displayed here
- *3 buttons* – Continue, Start Over and Main Menu buttons are displayed here

JustCode Module	Description of corresponding application feature
Activities	Activities are at the heart of every android app. This was used to create the main, letter, word, sentence, and completed activities.
Handling User Interaction	This was important in regards to using buttons and being able to handle what happens when the user taps on a button or a clickable TextView.
Diving into XML	XML was incredibly important because it helped determine the layout of the textview, buttons and other things corresponding together within the user interface. Another useful part of XML was being able to reference the TextView and Buttons by using the id feature, and using that id feature in reference to creating an object of the button or textview within the implementation. Also being able to make the TextView clickable.
Switching Screens with Intents	Using an intent is crucial once the user completes the letter, word or sentence activity. From there I was able to use intent to pass an object, which is processed in the Completed Activity class and helps determine how many questions were answered correctly by the user. From there, if the user selects option, I used intent to switch to another screen and pass an object (with the Continue button) to continue off with the user answering those questions he/she got wrong.
Screen Layouts	Screen layouts were also key. Rather than using a LinearLayout, I used a RelativeLayout within XML which provided greater flexibility and ease to shift around anything that was created.