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Section: 111H
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Post Mortem

Part I: Term Project

Learning Experience

Phase 1:

The task for phase 1 of the term project was to develop an app that alows the the user to select from a range of hues, then a constant saturation, then finally a constant value for the swatch. These swatches were to be seleceted from and displayed in a listView. Another requirement for this phase was to create each of these iterations in a fragment and use the fragment manager to swap out the currently displayed fragment.

I accomplished phase 1 by basing the overall structure of the program using the task4tigers app we developed in class. Since each section was a listView, I made each fragment a ListFragment. In addition, I decided the best way to move from fragment to fragment would be to implement a series of callbacks that would allow the ListFragments to pass the selected swatch back to the MainActivity and have then have the MainActivity replace the fragment with what should next be displayed. In addition, I created a SwatchHelper class to both serve as a wrapper for the swatches we created but also to generate the gradients for the swatches used in each listview. This phase also required an adapter for the listView, for this I based the adapter off of the X11Colors app's adapter, which we developed a few weeks back.

Phase 2:

The second phase of the term project had us extending the functionality of the app so that it will use the range created by our selections of the Hue, Saturation, and Values from the first phase to query a database of named colors.

I based the structure of this phase off of the task4tigers app we created over the past weeks. Using the structure of the Tasktable, TaskDBHelper, TaskCursorAdapter, and TaskContentProvider to develop my own table, dbhelper and content provider. For the results fragment (which is brought up after the value is selected) I created a display of the selected swatch as well as it's parameters. I then

used these parameters to query the database for values within each range given by the swatch and then display it in the listview. I also added a button to allow the user to start the explorer again since I was having trouble getting the back button to work properly since I was swapping out fragments instead of creating using intents to call activities. Since we were also to make sure that the database was not instantiated a large number of times I made it so that the database is only created if no database of the same name is found in the app's directory. If a database does not yet exist, it finds the included text file and executes each line (which contains an insert SQL statemtent for the requested colours in the wikipedia pages on each line) to create the database.

Phase 3:

The third phase of the assignment was to add a button to our app to allow us to sort the results we obtained obtained in our second phase. We were to provide these options through an AlertDialog.

This phase was fairly straightforward once I used the resource to look at the AlertDialogBuilder. The builder has a function called setSingleChoiceItems that creates the a radio button-like dialog using a given array of strings for its entries. Thus I made it save the option to a temporary variable and when they clicked the positive button it saved the temporary variable to the variable containing the key to the sort preference. Once they clicked the positive button, the fragment restarted the loader and used the cursoradapter to update the sort preference and re-sort the previews in the listview.

Phase 4:

Phase 4 was very straightforward once I figured out how to use AlertDialogs. The goal of phase 4 was to allow us to change the number of swatches given by the fragments we used to select our swatch.

This was a fairly simple addition, I programatically created a seekBar and a textView to use in the AlertDialog. The seekBar is a slider that we used to select the swaches as per our preferences. On the progress update of the slider, I set it so that it saved the value into a temporary variable as well as updated the textView to show the current value of the temporary variable. Once the user clicks the positive button, it saves the value for the number of swatches and repopulates the listView with the appropriate swatches.

Phase 5:

Phase 5 was just a minor extention of phase4. We just had to add the ability for the user to change the central hue used for the first swatch. I accomplished this with second textView and seekBar, which worked the same as the first except this time it saved a value for the cetral hue. This also was saved on positve button click and was included when repopulating the listView.

Phase 6:

Phase 6 was overall a very minor adjustment. The goal was to create a preview for the central hue that is adjusted in real team with the slider. I accomplished this very simply by using the SwatchHelper to convert the current central hue value into a color int and then setting the background of the slider as that color. I also set it to update on progress update of the slider.

Reflection

What were the educational objectives (i.e. why do you think the term project was assigned) and how well did you achieve them?

The objective of the term project was, I assume, to familiarize ourselves with android functionality and demonstrate that we could work with adapters and cursors. In addition, because of the couple new topics that we needed to know, it also demonstrated that we have enough of a basic understanding of the android resources to progress further on our own. I believe I accomplished better than I initially expected.

What were your personal goals and how well did you achieve them?

My personal goal was to make it to at least phase 3 and once I finished that I actually moved far past that and was able to complete the main project.

How much time did you spend on the project?

I spent a total of 2 (full) days working on the project since I didn't initially have th firmest grasp on a few of the concepts.

How interesting was the term project?

The term project was actually reasonably interesting and am quite pleased with the result

In order of importance, what were the biggest challenges you faced and how were they handled?

The biggest challenges I had involved working with the databases, I had little experience with databases going into the project and as a result I had a lot to learn. I used stackOverflow to figure out the errors with my cursorAdapter and I used a youtube video to figure out how to include a database (once). In addition I used sublime's macro functionality to format the data from wikipedia's tables into the insert statements.

What went right?

In the end? The entire project was completed so most things.

What went wrong?

The project came at an ill opporturne time and I was not initially able to prioritize it. In addition, I didn't work on it phase by phase and as a result, had to debug more issues at once.

If you had it to do all over again, how, specifically, would you avoid (or at least mitigate) the problems you confronted and leverage your successes?

The first thing I would change would be to start the first phase when it was first announced. The first three phases were the majority of the work and as a result spreading them out further would have greatly improved my productivity.

Part II: Course

Reflection

What were the course goals and how well did you achieve them?

The course goal was to give students an understanding of the android framework and how to use it to develop android apps.

What were your personal goals and how well did you achieve them?

My goal was to get to the point where I could comfortably have the tools to develop apps on my own. I believe I am at this point so I would say I achieved them.

If you had it to do all over again, would you take this course? Why?

If the time period stayed the same, I unfortunately would not. I had far overcommitted myself this semester and needed more time for a lot of things. If I could have taken it some other semester, I would gladly have taken it. I believe I have learned a lot from this course.

Under what circumstances would you reccomend this course to a friend?

If they even have a passing interest in app development.

In order of importance, what were the biggest challenges you faced and how were they handled?

My biggest challenges with this course were not due to the course itself, they were due to personal issues and time commitments that I'd rather not get into.

What went right?

The overall learning experience went rather well and I feel reasonably comfortable with the android resources.

What went wrong?

My primary issue in this course was that I did not prepare sufficiently and did not allot myself sufficent time for the assignments.

If you had it to do all over again, how, specifically, would you avoid (or at least mitigate) the problems you confronted and leverage your successes?

I would choose to review more and start earlier on assignments in order to break them up further as well as schedule my time better for the other issues.

Assesment

Unfortunately, I cannot give myself, in good confidence give myself a grade above a 75 with how I performed in this class. I was unprepared for the quizes and for the homeworks I submitted very rushed jobs. While I feel I did well on the term project, I don't believe it sufficiently outweighs my other shortcomings.

Moving Forward

In order of personal importance, what lessons did you learn from this experience?

I learned how to use resources like the android documentation as well as good android programming practices.

What advice would you give to future students in this class?

Take lots of detailed notes as well as schedule your time well.

Course Content

What percentage of the material covered did you know prior to taking this class?

I actually new very little about the material (aside from java and colors) going in.

Given that some students had essentially no prior experience and others a great deal ...

Was the course content appropriate for the audience? Why?

I believe that the content was appropriate however I also feel like a lot less was covered than was initially intended.

Was topics should be dropped? Why?

As much as I appreciated it, I think that the thread section was likely done in too much detail and while useful, I believe it took up a disproportionate amount of time

Was topics should be added? Why?

Adding apis and using mobile specific feature like gestures, gyroscope, and swipes should be added since these are functionality tied to the platform and learning these will add tools to the kits of prospective developers.

On a scale of 0 to 10, with 0 being "mind-numbingly slow," 5 being "just right," 10 being "obscenely fast," How would you rate the average speed that content was presented?

3, I feel we hung on some topics to long.

On a scale of 0 to 10, with 0 being "insultingly easy," 5 being "just right," 10 being "unbelievably hard," How would you rate the difficulty of the homework?

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On a scale of 0 to 10, with 0 being "insultingly easy," 5 being "just right," 10 being "unbelievably hard," How would you rate the difficulty of the term project excluding the BONUS phase?

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Which was the more effective learning experience for you: when I wrote code in class, explaining it as I went, or when I discussed prewritten code?

The former was the more effective learning experience

Do you have any suggestions on how to better present the content?

I would suggest trying a format where you give students a skeleton of the code where the previous topics are filled out beforehand. And then go over the old material quickly but then develop the new material alongside the class.

How would you make the course better?

My suggestion above is about all I have.