Introduction

For this task, you will develop a multiple-screen mobile application for WGU students to track their academic terms, courses associated with each term, and assessments associated with each course. The application will allow students to enter, edit, and delete term, course, and assessment data. It should provide summary and detailed views of courses for each term, provide notifications for upcoming performance and objective assessments, and notify students of deadlines and tracking milestones even after the application is closed. You will create a wireframe as a visual guide, representing the skeletal framework of the application. Your application will use an SQLite database.

Requirements

Note: The assessment must be submitted using the Xamarin.Forms framework.

For this assessment, you are welcome to use these plugins:  
[https://docs.microsoft.com/en-us/xamarin/essentials/](https://protect-us.mimecast.com/s/JEj5CERXn9C06JPjsNTU3-?domain=na01.safelinks.protection.outlook.com)  
[https://github.com/edsnider/LocalNotificationsPlugin](https://protect-us.mimecast.com/s/c8ksCG6Xp5UOLpg9T7_zZ9?domain=na01.safelinks.protection.outlook.com)  
<https://docs.microsoft.com/en-us/dotnet/api/Xamarin.Forms.Picker?view=xamarin-forms>  
<https://docs.microsoft.com/en-us/dotnet/api/Xamarin.Forms.DatePicker?view=xamarin-forms>  
All other external plugins and libraries are not allowed in the project.

1. Low-fidelity wireframe
   1. As many academic terms as needed
   2. each term should include the addition, editing, deletion, and storage of all the following:
      1. term title
      2. start and anticipated end dates (use a DatePicker)
   3. Add six courses for each term
   4. For each course, include the addition, editing, deletion, and storage of all the following course information
      1. course name
      2. start and anticipated end dates (use a DatePicker)
      3. course status (use a Picker)
      4. course instructor’s information
         * name
         * phone
         * email
      5. optional notes
         * add
         * share
         * display
      6. notification
         * start and end of each course
      7. display of a detailed view of each course
         * including the due date
      8. editing of the detailed course view screen
   5. Add two assessments for each course
   6. each assessment should include the addition, editing, deletion, and storage of all the following assessment information
      1. one objective assessment
      2. one performance assessment
      3. name of both assessments
      4. notifications for the start and end dates of each assessment
2. Using Xamarin.Forms, create a mobile application aligned to the wireframe drawn in part A
   1. Provide an interface for all the following information for as many academic terms as needed
      1. academic term title (e.g., Term 1, Term 2, Spring term)
      2. start and end dates (use a DatePicker)
   2. Provide an interface that allows the user to access all the following features for each academic term:
      1. add and display a list of six courses for each term
      2. display a detailed view of each term, including all the information from part B1
   3. Provide the interface that allows the user to access and edit all the following details for each course:
      1. course title
      2. start and anticipated end dates (use a DatePicker)
      3. course status (e.g., in progress, completed, dropped, plan to take) (use a Picker)
      4. the course instructor’s information
         * name
         * phone
         * email
         * include validation to prevent the user from saving a null value (e.g., an invalid email address)
   4. Create features that allow the user to do all the following for each course:
      1. add two assessments
         * one performance assessment
         * one objective assessment
      2. add and display optional notes
      3. enter, edit, and delete course information
      4. display an editable detailed view of the course, including the due date
      5. set alerts (e.g., notifications) for the start and end date of the course
      6. share notes via a sharing feature (e.g., email, SMS)
   5. Provide an interface for the user to do all the following for each assessment:
      1. include the names and due dates
      2. enter, edit, and delete assessment information
      3. set notifications for anticipated due dates
   6. Write code to create a set of data for evaluation purposes, including one term and one course from part B3, and include the two assessments from part B4 for that course.
      1. Include your own name, phone number, and email address as the course instructor for the course.
3. Examine the wireframe from part A, to determine any changes that you made during the development of the mobile application.
   1. Explain the reasons for any changes made during the development of the mobile application, by adding comments within the wireframe. If no changes were made, include that comment.
   2. Confirm that, after the inclusion of the changes made during development, the wireframe aligns with the mobile application.

Requirements:

A1:Academic Terms in Wireframe

The low-fidelity wireframe includes as many academic terms as needed, the addition, editing, deletion, and storage of term titles, and the start and anticipated end dates associated with each term. Dates are entered using a DatePicker, and it is verified that all start dates for terms are set before the anticipated end dates.

A2:Courses in Wireframe

The low-fidelity wireframe allows for the inclusion of 6 courses for each term and the information associated with each course. The wireframe for each course allows for the addition, editing, deletion, and storage of all additional given course information. It is verified that all start dates for each course are set before the anticipated end dates.

A3:Assessments in Wireframe

The low-fidelity wireframe allows for the inclusion of 2 assessments for each course, 1 objective and 1 performance assessment, and includes the addition, editing, deletion, and storage of all the given assessment information.

B1:Interface for Terms

The mobile application allows the user to enter the title of each academic term and all start and end dates for each term. Dates are to be entered using a DatePicker, and it is verified that all start dates for terms are set before the anticipated end dates.

B2:Term Interface for User

The mobile application provides an interface for the user to add and display 6 courses for each term and to display a detailed view of each term that includes all the information from part B1.

B3:Course Interface

The mobile application interface allows the user to access and edit all of the given details for each course. The application uses a DatePicker for all start, and anticipated end dates and uses a Picker to enter course status. It is verified that all start dates for each course are set before the anticipated end dates. The interface includes validation to prevent the user from saving a null value.

B4:Course Features for User

The mobile application allows the user to enter 2 assessments, 1 performance and 1 objective assessment for each course, and allows the user to do all additional given features.

B5:Assessment Interface

The mobile application provides an interface that allows the user to include names and dates, and enter, edit, and delete assessment information, and set notifications for due dates.

B6:Data Set

The code written creates a set of data for evaluation purposes, including 1 term and 1 course from part B3, and the 2 assessments from part B4. The candidate’s own name, phone number, and email address are provided as the course instructor.

C1:Changes to Wireframe

The wireframe from part A includes comments that explain the reasons for any changes made to the design, during the development of the mobile application. Or there is a comment stating no changes were made.

C2:Confirm Wireframe matches

The wireframe aligns with the completed mobile application from part B which includes the comments from C1.

D:Source File

The source file for the mobile application is complete and runs on any platform as a Xamarin.Forms application.

Detailed Requirements

1. Low-fidelity wireframe
   1. Academic terms
      1. As many as needed
      2. Term title
         1. Add
         2. Edit
         3. Delete
         4. Store
      3. DatePicker for start date
      4. DatePicker for end date
   2. Six courses for each term
      1. Course name
         1. Add
         2. Edit
         3. Delete
         4. Store
      2. DatePicker for start date
         1. Add
         2. Edit
         3. Delete
         4. Store
      3. DatePicker for anticipated end date
         1. Add
         2. Edit
         3. Delete
         4. Store
      4. Picker for course status
         1. Add
         2. Edit
         3. Delete
         4. Store
      5. Course instructor’s information
         1. Name
            1. Add
            2. Edit
            3. Delete
            4. Store
         2. Phone
            1. Add
            2. Edit
            3. Delete
            4. Store
         3. Email
            1. Add
            2. Edit
            3. Delete
            4. Store
      6. Optional notes
         1. Add
         2. Share
         3. Display
      7. Notification for each course
         1. Start and end dates
      8. Display of a detailed view of each course
         1. Including the due date
      9. Editing of the detailed course view screen
   3. Two assessments for each course
      1. One objective assessment
      2. One performance assessment
      3. Name of both assessments
      4. Notifications for the start and end dates of each assessment
2. Xamarin.Forms app based on wireframe
   1. Terms overview
      1. Academic term title (e.g., Term 1, Term 2, Spring term)
      2. DatePicker for start date
         1. Must be before end date
      3. DatePicker for end date
   2. Term
      1. Six courses for each term
         1. Add
         2. Display
      2. Display details
         1. Academic term title
         2. Start date
         3. End date
   3. Course
      1. Course title
      2. DatePicker for start date
         1. Must be before end date
      3. DatePicker for anticipated end date
      4. Course status Picker
         1. In progress
         2. Completed
         3. Dropped
         4. Plan to take
      5. Course instructor’s information
         1. Name
         2. Phone
         3. Email
      6. Validation to prevent the user from saving a null value (e.g. invalid email address)
   4. Detailed course view
      1. Add two assessments
         1. One performance assessment
         2. One objective assessment
      2. Optional notes
         1. Add
         2. Display
      3. Enter, edit, and delete course information (one form for all information)
      4. Display an editable detailed view of the course, including the due date
      5. Notification
         1. Start date
         2. End date
      6. Share notes via a sharing feature (e.g., email, SMS)
   5. Assessments
      1. Name
      2. Due date
      3. Enter, edit, and delete assessment information
      4. Notification for anticipated due dates
   6. Sample date
      1. Button/feature to autofill
         1. One term
         2. One course
         3. Two assessments
         4. Include your my own name, phone number, and email address as the course instructor for the course
3. Examine the wireframe from part A, to determine any changes that you made during the development of the mobile application.
   1. Explain the reasons for any changes made during the development of the mobile application, by adding comments within the wireframe. If no changes were made, include that comment.
4. Confirm that, after the inclusion of the changes made during development, the wireframe aligns with the mobile application.