IS 3043 Section 01T
Secure Mobile Application Development
PA #5
100 points

You may save your workspace anywhere you want (PC, flash drive, etc). For this assignment please do the following:

In this exercise you are to do the following:

- Call this app **PA05**
- In Android Studio select "Nexus 5X" as your phone.
- You are to duplicate the app shown in the pictures on the last several pages.
- First you are to change theme in styles.xml to Theme.AppCompat.
- Then you are to add a new Launch Icon to your app using the image that is within the zipped folder for this assignment (it is called `list.png`). This launch icon is to appear on _every screen_ of your app.
- Your <u>first screen</u> will have the following widget: a single `ListView` widget. In your MainActivity.java file create an array of String consisting of the three strings "Rental Cars", "News", and "Myself". Create a `ListView` object and an `ArrayAdapter` object to fill in the `ListView` widget on your first screen and then create a listener for the `ListView` object (shown in class). When the user selects the first item on the list (Rental Cars), your second screen should be displayed (look below), when the user selects the second item on the list (News), your third screen should be displayed (look below), and when the user selects the third item on the list (Myself), your fourth screen should be displayed (look below).
- Your <u>second screen</u> (call it `RentalCarsActivity`) will have the following widget: a single `ListView` widget. In your RentalCarsActivity.java file create an array of String consisting of the four strings "Car picture", "Hertz", "Alamo", and "Avis". Create a `ListView`

object and an `ArrayAdapter` object to fill in the `ListView` widget on your second screen and then create a listener for the `ListView` object. When the user selects the first item on the list (Car picture), your app will go to another screen that will display a picture of a car. This screen (call it `CarPicActivity`) will display the picture of a car and will have one `ImageView` widget and two `TextView` widgets. For this `ImageView` widget you are to associate it with a picture of a car. This image is within the zipped folder for this assignment. Give this `ImageView` widget a content description value of "Cat image" (look below). When the user selects the second item on the list (Hertz), your app should display the Hertz web site. Do the same for the third item (Alamo) and the fourth item (Avis), respectively, if the user selects either one of these items. The web sites for these car rental companies are as follows:
- https://www.hertz.com
- https://www.alamo.com
- https://www.avis.com

- Your <u>third screen</u> (call it `NewsActivity`) will have the following widget: a single `ListView` widget. In your NewsActivity.java file create an array of String consisting of the four strings "Newspaper picture", "KSAT", "MSN", and "Weather Channel". Create a `ListView` object and an `ArrayAdapter` object to fill in the `ListView` widget on your third screen and then create a listener for the `ListView` object. When the user selects the first item on the list (Newspaper picture), your app will go to another screen that will display a picture of a newspaper. This screen (call it `NewspaperPicActivity`) will display the picture of a newspaper and will have one `ImageView` widget and two `TextView` widgets. For this `ImageView` widget you are to associate it with a picture of a newspaper. This image is within the zipped folder for this assignment. Give this `ImageView` widget a content description value of "Newspaper image" (look below). When the user selects the second item on the list (KSAT), your app should display the KSAT web site. Do the same for the third item

(MSN) and the fourth item (Weather Channel), respectively, if the user selects either one of these items. The web sites for these news companies are as follows:

- o https://www.ksat.com
- o https://www.msn.com
- o https://www.weather.com

- Your <u>fourth screen</u> will have the following widgets: one `ImagView` and two `TextView` widgets. For this `ImageView` widget you are to associate it with a picture of *<u>yourself</u>* (not me). You are to supply a picture of yourself for this part of the assignment. Give this `ImageView` widget a content description value of "My image" (look below). Name your fourth screen `MyPicActivity`.

- You are to use the `strings.xml` file in Android Studio where you are to create keys with the following string values:

      "Nice car!"
      "Car image"
      "Read all about it!"
      "Newspaper image"
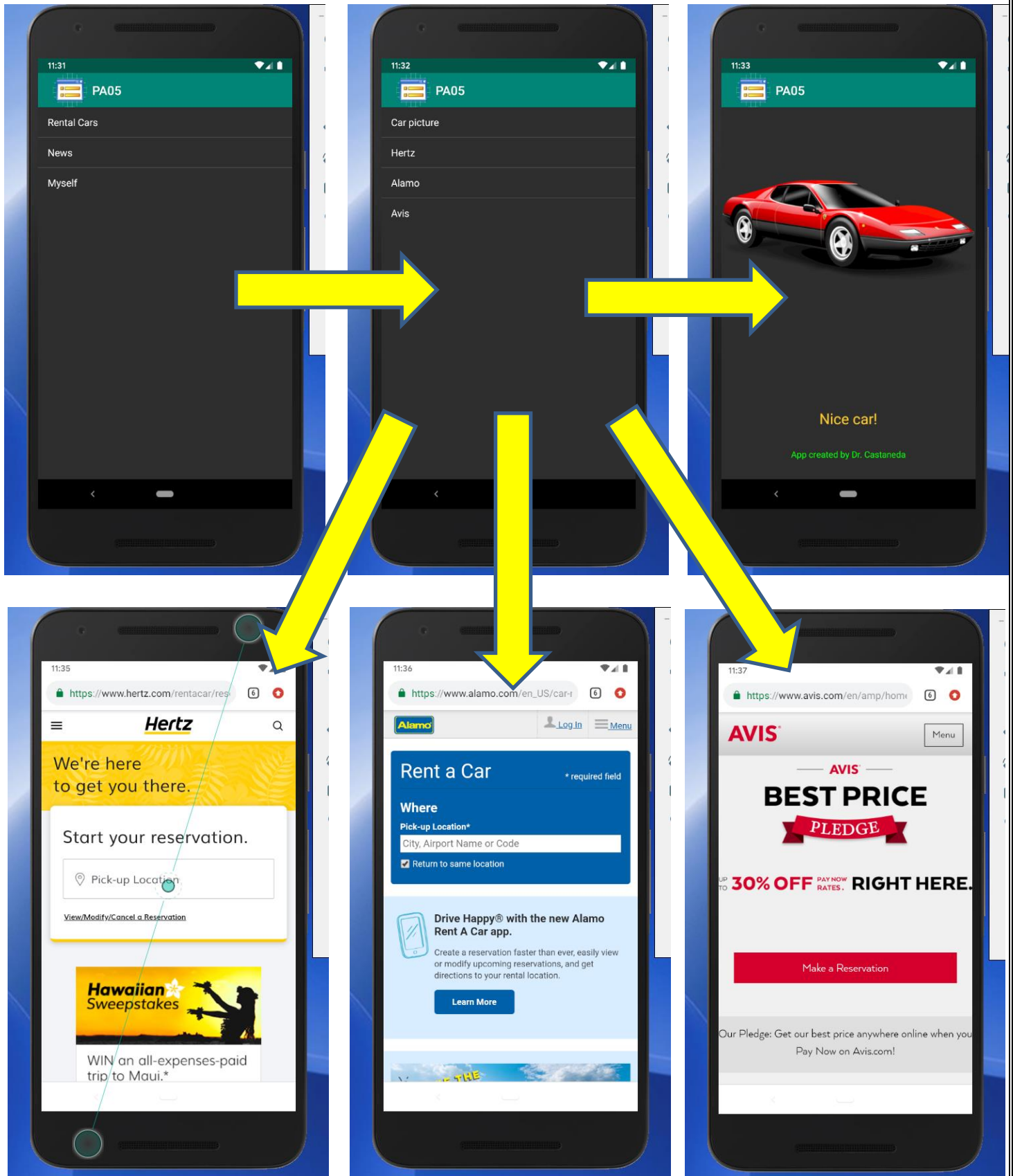   "Dr. Castaneda" ←your name here
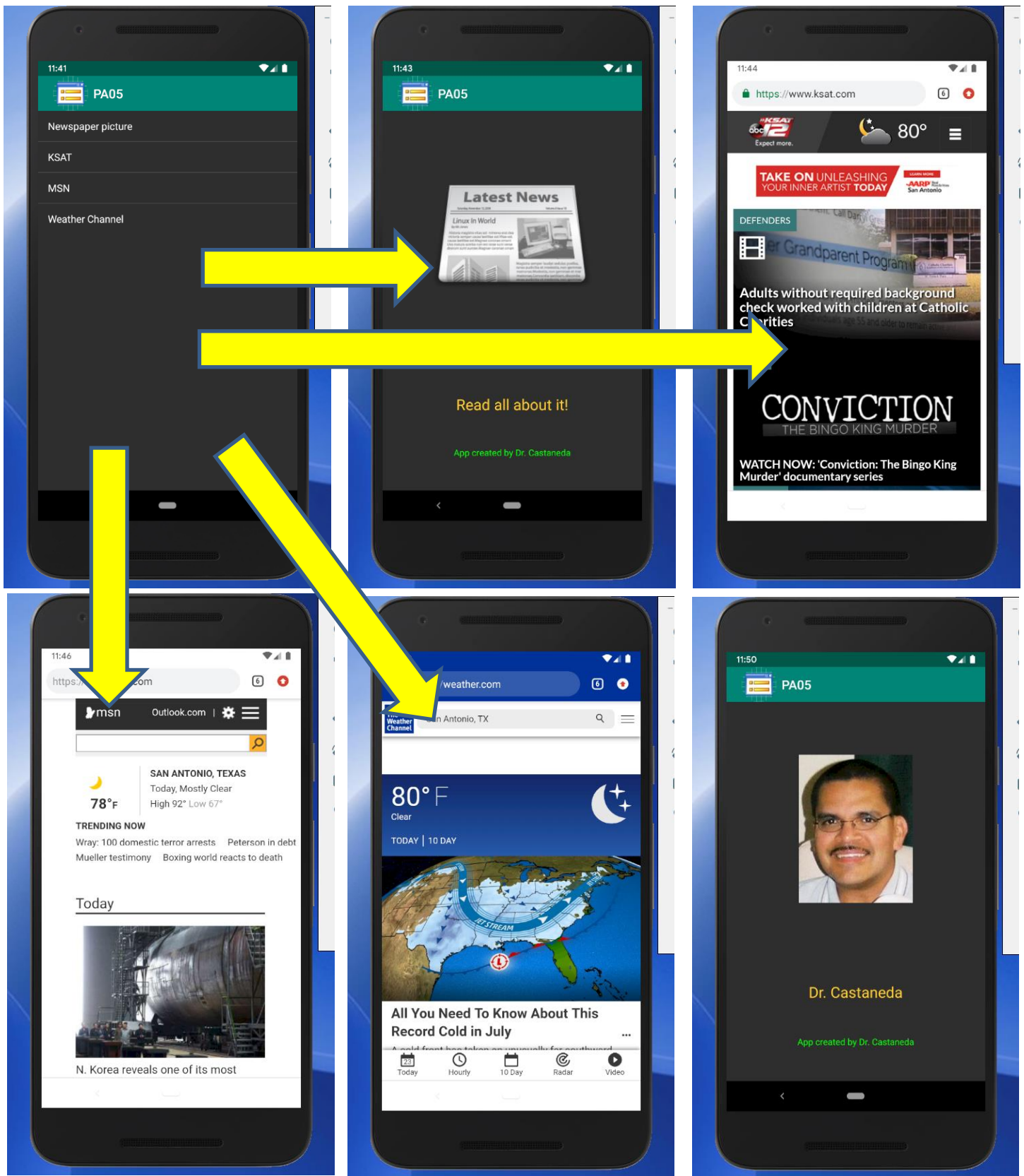   "My image"
      "App created by <your name>"

- The values (i.e. keys) in the `strings.xml` file are to be associated with the appropriate widgets on your app.
    - o For the widgets associated with "Nice car!", "Read all about it!", and the text that will show your name, make the text size 24sp for all three of them. You may give these texts any color you wish
    - o For the widget associated with "App created by <your name>" make the text size 14sp. Give this text the color light green.

- Here are some colors that you can choose from:
    - o #0000FF blue

- o #000000 black
- o #FF0000 red
- o #009933 dark green
- o #00FF00 light green
- o #FFFF00 yellow
- o #FFCC33 light orange
- o #FF00CC lavender/purple

- Each of the `TextView` widgets are to be placed in the appropriate location on your app (i.e. look at the pictures to see this).
- Also, make sure that you include comments into your code (MainActivity.java, RentalCarsActivity.java, NewsActivity.java, MyPicActivity.java, CarPicActivity.java, and NewspaperPicActivity.java) as shown in class
- Run your app on the virtual device "Nexus 5X" (or one similar to it).

You should turn in the APK file that you will generate (demonstrated in class) and the files **MainActivity.java**, **RentalCarsActivity.java**, **NewsActivity.java**, **MyPicActivity.java**, **CarPicActivity.java**, **NewspaperPicActivity.java**, **activity_main.xml**, **activity_rental_cars.xml**, **activity_news.xml**, **activity_car_pic.xml**, **activity_newspaper_pic.xml**, **activity_my_pic.xml** **styles.xml**, and **strings.xml**. Put these files within a folder (call it **PA05**) and then compress this folder.   Finally, it is this compressed folder that you must submit via Blackboard for this assignment.

Prepared by Dr. Castañeda